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**A Weekly Journal of Pharmacy and the Drug-trade.**

ESTABLISHED 1859.

**Head Office: 42 Cannon Street, London, E.C.**

Branch Offices	Melbourne, Vic.	... Fink's Buildings, Elizabeth Street.
	Sydney, N.S.W.	... 114a Pitt Street.
	Adelaide, S.A.	... 76 Brookman's Building, Grenfell Street.
	New York, U.S.A.	... Park Row Building.

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Ten shillings a year in advance, post free to any part of the world, including a copy of *THE CHEMISTS' AND DRUGGISTS' DIARY* next published. Single copy, 4d.; Summer or Winter Number, 1s.; *DIARY*, 3s. 6d. Postal orders and cheques to be crossed "Martin's Bank (Limited)."

**Prix de l'abonnement:** The Chemist and Druggist une fois par semaine, et l'agenda du Chemist and Druggist une fois par an, 12.50 francs par an, franco.

**Abonnementspreis:** The Chemist and Druggist einmal wöchentlich, und Notizkalender des Chemist and Druggist einmal im Jahre, 10 Mark jährlich, frei in's Haus geliefert.

**Precio de suscripción:** The Chemist and Druggist una vez por semana, y el Agenda del Chemist and Druggist una vez al año, 12.50 pesetas anuales, franco.

THIS JOURNAL is regularly supplied by subscription to the whole of the Members of SIXTEEN PHARMACEUTICAL SOCIETIES in the British Empire. The associate Journal *The Chemist and Druggist of Australasia*, published at Melbourne and Sydney, is also supplied to all Australasian subscribers.

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#### "THE CHEMISTS' AND DRUGGISTS' DIARY" FOR 1903 Is Now Being Prepared.

The indispensable desk and office companion.  
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## Summary.

CHRISTMAS GOODS are now in season, and some are described on p. 480.

THREE of the poisoning cases recorded on p. 469 were caused by sulphuric acid.

OUR CORRESPONDENCE this week is varied as to subjects, some of it being quite brisk (p. 492).

PROFESSOR RUDOLF VIRCHOW, the eminent pathologist and German politician is dead (p. 478).

MR. G. D. BEGGS has resigned the presidency of the Pharmaceutical Society of Ireland (p. 499).

OUR recent observations on East Indian ipecacuanha are confirmed by Paul and Cowley (p. 482).

A PHARMACY suitably divided for customers of the two sexes is the latest American notion (p. 473).

THE CONDITIONS under which duty-free ether is permitted to be used in Holland are stated on p. 472.

THE preparation of milk for babies is practically described in an article on p. 488 by Dr. Forrester, of Glasgow.

ONLY SIX CHEMISTS have filled the presidential chair of the British Association, and fourteen peers (p. 467).

MR. GEO. R. SIMS says something about the way Englishmen are overcharged abroad, even by chemists (p. 488).

THE DEWSBURY CHEMISTS' ASSOCIATION has the distinction of commencing the Winter Session this year (p. 491).

A PHARMACIST's summer holiday in Chester is briefly described and illustrated with figures of an old mortar (p. 481).

AMERICANS are looking after the drug-trade with Chili, at present chiefly in the hands of British houses (p. 489).

AN ANTI-SUBSTITUTION CAMPAIGN in U.S.A. similar to that in this country has had a check from the N.A.R.D. (p. 473).

THE MEDICINE-ACCOUNTS of the Belfast Workhouse-infirmary have created a scandal. Some details are given on p. 470.

NEW INTERNATIONAL REGULATIONS respecting patents, designs and trade-marks, came into force on September 14 (p. 468).

THE CONFECTIONERS' EXHIBITION held in the Agricultural Hall, London, this week, contains matters of trade-interest (p. 479).

VICTORIAN PHARMACISTS complain about the chemistry examination-papers of the Melbourne College of Pharmacy being too stiff (p. 473).

BRITISH BUSINESS in August was good on the whole. We give particulars about it, and contrast the year's business of leading countries (p. 485).

THE IRISH PHARMACEUTICAL COUNCIL has agreed not to admit students to the practical chemistry course until they have attended theoretical chemistry classes (p. 499).

SIR FREDERICK ABEL, BART., the "Chemist of Defence" and director of the Imperial Institute, died on September 6. An account of his career is given on p. 478.

INTERESTING PARTICULARS regarding disinfectants and sheep-dips are furnished by the Cape Government analyst in his annual report (p. 486). We give Mr. Juritz's portrait on p. 472.

THE BRITISH ASSOCIATION MEETING opened at Belfast on Wednesday evening, when the President (Professor James Dewar, F.R.S.) delivered an address, of which excerpts are given on p. 474.

THE BRITISH PHARMACEUTICAL CONFERENCE has been held up by a German contemporary as an example to follow. Incidentally the difficulties that beset German pharmacists are dealt with (p. 487).

THE AGENT-GENERAL OF NEW ZEALAND calls our attention to the difficulty colonials have in dealing with English firms of scientific-instrument makers, owing to their backwardness as compared with Germans (p. 488).

AN UNQUALIFIED ASSISTANT has been fined in Aberdeen for selling oxalic acid. The solicitor for the defence stated that he had bought the poison from thirteen unqualified assistants and apprentices in the town (p. 490).

THE business tone in drugs and chemicals continues quiet. American peppermint oils are considerably dearer, and higher prices are also asked for sassafras, geranium, lavender, and peach-kernel oils. Arrowroot, serpentry, and cetaceum are likewise dearer. In chemicals cream of tartar and pearlashes are easier, and hyposulphite of soda has advanced (p. 496).



## English News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

### Brevities.

A chemist's assistant, named Henry James, was fined 10s., including costs, at Hitchin on September 2, for riding a bicycle on the highway without a light.

Hitherto Cambridge shops have closed at 5 P.M. on Thursdays during the winter, and a movement has now been set on foot with the object of securing general closing at 1 or 2 P.M.

The Solihull Board of Guardians, in appointing a new medical officer, has decided to supply expensive medicines and drugs direct, instead of leaving the doctor to do so out of his salary.

The Swaffham Board of Guardians have appointed Mr. G. E. Knights, chemist and druggist, Market Place, to supply the medical appliances, drugs, disinfectants, and oil required at the workhouse.

At Doncaster Quarter Sessions, on September 5, a painter named Taylor was sentenced to fourteen days' imprisonment for smashing a plate-glass window at the establishment of Mr. M. H. Stiles, pharmaceutical chemist, Rotherham.

At the West Ham Police Court on September 9, a cooper named Goodger was remanded on a charge of breaking and entering the warehouse of Mr. M. Greenbaum in Lucas Road, Stratford, and stealing twenty-four bags of wax valued at 40/.

A fire occurred on September 2 at the premises of Mr. Robert Thomas Woodall, chemist and druggist, in 25 Queen Street, Portsea. Mr. Woodall managed to extinguish the flames with the assistance of passers-by before any great damage was done.

On September 2 burglars broke into the premises of Mr. S. Cleaver, chemist and druggist, in Wharf Street, Leicester. The visitors effected an entrance through the cellar, and broke open a desk and the till. An abortive attempt was made to force the safe.

Mr. Seyler, Public Analyst for Glamorganshire, in his report for last quarter, says the samples of drugs examined, including aromatic spirit of ammonia, camphorated oil, sweet spirits of nitre, milk of sulphur, paregoric, and olive oil, were all of good quality.

### The Rational Remedy Company (Limited).

Capital 10,000/. Managing director, Arthur E. Loraine, medical pharmacist, 63 King Street, Bury.

This is the abbreviated heading of a provincial advertisement. As Mr. Loraine's name is not on either of the pharmaceutical registers he may get into trouble for the use of the title "medical pharmacist."

### Yorkshire Notes.

Taylor's Drug Company (Limited) have introduced a novelty into their price-list this year in the shape of a free insurance-coupon for 100/., with the idea, no doubt, of ensuring the careful preservation of the list by those who get it and a large increase of the number who take the trouble to get it. They will even send the list post-free.

Mr. F. W. Richardson, F.C.S., the Bradford City Analyst, has just passed through a somewhat alarming experience of the risks of a too close acquaintance with poisons in experimenting. On examining the carcase of a valuable dog, in order to determine whether it had been poisoned, he recovered  $\frac{1}{16}$  gr. of an alkaloidal substance, and somewhat incautiously put  $\frac{1}{1000}$  gr. of it on his tongue. Within a few hours he found the poison produced fever and acute gastro-enteritis, and for a couple of days he was decidedly ill.

### The Sanitary Institute.

A health exhibition is now open at St. James's Hall, Manchester, in connection with the Sanitary Institute. It represents the latest and most modern appliances to be

found in sanitary science, and these are classified into four divisions:—Science in relation to hygiene; hygiene of special classes, trades and professions; construction and sanitary apparatus; personal and domestic hygiene. There are 113 exhibitors, the exhibits ranging from dust-destructors to soaps and disinfectants. America and France are represented. The exhibition is open for three weeks. Prominent amongst the exhibitors are Messrs. Jewsbury & Brown, chemists and mineral-water manufacturers, Ardwick Green, who are showing a complete range of their mineral and medicinal waters and aerated beverages. These comprise soda-water (B.P. and other strengths) potash-water, lemonade, ginger ale, lithia-water, lysidine water (containing 20 minims lysidine in the half-pint), piperazine water (each syphon contains piperazine and phenocoll hydrochloride, of each 15 gr.), quinine-tonic water, aerated-lime water, Carrara water, seltzer-water, and koumiss.

### Nottingham School of Pharmacy.

We have received from Mr. A. Russell Bennet, F.C.S., pharmaceutical chemist, the principal of this school, particulars of the classes which he conducts at Carlton Chambers, 13 Victoria Street, Nottingham. Mr. Bennet has a series of three classes. The full-time day-classes meet at 9.30 A.M., and the whole of the forenoon each day is devoted to lectures, materia medica, pharmacy, prescription-reading, volumetric analysis, physics, and dispensing and practical pharmacy. The afternoons are devoted to practical chemistry from 2 to 5 P.M. Evening-classes are held three times a week, from 8.15 to 10.15 P.M., and afternoon-classes on Wednesdays and Thursdays. All these are for the Minor examination. The fee for a term of three months is 8/ 8s. or 15/ 15s. for two terms in the day-classes, and the evening and afternoon classes are 3/ 3s. for a three-months' course. On September 4 there was an examination for a scholarship and prizes at the school, when questions in botany, materia medica, organic chemistry, and pharmacy were set. Mr. Bennet publishes a useful card, in which the poison-schedules and particulars regarding poisons and the antidotes are given, along with brief particulars of the school. He will send a copy of the card to any of our subscribers who writes to him for it.

### Sewage Treatment.

The London County Council has during the past year used 20,510 tons of lime and 4,912 tons of sulphate of iron in sewage-treatment. Dr. Houston, reporting on the bacterial treatment, says that, however satisfactory the process may be from the chemical and practical point of view, the effluents from the bacterial beds cannot be reasonably assumed to be more safe in their possible relation to disease, when the water is used for drinking, than raw sewage slightly diluted, but otherwise unaltered in its bacterial composition.

### Natural Gas in Sussex.

The *Times* of Wednesday, September 10, contains an interesting article on natural gas, which is derived from borings in the neighbourhood of Heathfield, forty-six miles south-east of London. The gas comes from the Kimmeridge clays, and has a distinct odour of petroleum; it contains 72½ per cent. of marsh-gas, 5½ of higher hydrocarbons, 4 of carbon monoxide, and 18 per cent. of oxygen. The gas, without enrichment, burns with a light of twelve to fourteen candle-power, and is exploited by the Natural Gasfields of England (Limited).

### Patent, Designs, and Trade-marks.

The following amendments to the International Convention's rules come into force on September 14:—

(a) The priority granted to applicants for patents, designs, or trade-marks in any of the States of the Convention shall be twelve months for patents and four months for designs or trade-marks, reckoned from the date of the application, in the State in which the applicant is domiciled.

(b) The patents applied for in any of the States of the Convention by persons entitled to the privileges thereof shall be independent in duration of patents obtained for the same invention in other States, whether parties to the Convention or not.

(c) No patent applied for under the Convention shall incur forfeiture for non-working until the expiration of a minimum period of three years from the date of application.

The extended period of priority given to applicants under



the Convention has been granted in Great Britain since January 1, 1902, by the amending Act that came into force then. It now, therefore, also applies to Belgium, Denmark, France, Italy, Japan, Netherlands, Norway, Portugal, Sweden, Switzerland, Tunis, and United States.

#### Drug Contracts.

At the special meeting of the Holborn Board of Guardians on Wednesday, September 10, tenders for supplies for the year ending October 1903 were considered. The tenders for drugs for the dispensaries at the Highgate Infirmary, the City Road Workhouse, and Mitcham Workhouse and Schools, were by Messrs. Corbyn, Stacey, & Co., who offered 37½ per cent. discount off list, Messrs. Davy, Hill & Co., 27½, and Messrs. Burgoyne, Burbidges & Co., 29½. Messrs. Corbyn, Stacey & Co. got the contract.—At the same time Camwal (Limited) got the contract for aerated-waters at the following prices: Soda-water, in syphons, 1s. 5d. per dozen; ditto in screw-stoppered bottles (large), 10d. per dozen; (small), 8d. per dozen; lemonade, in syphons, 2s. 3d. per dozen; in large screw-stoppered bottles, 10d.; small, ditto, 8d.; lithia-water, in syphons, 2s. 3d. per dozen; ginger-beer, in screw-stoppered bottles, 10d. per dozen.

#### The Chemist and the Contract.

At a meeting of the West Ham Board of Guardians on September 4, a letter was read from Mr. F. W. Gwinn, chemist and druggist, of Cann Hall Road, Leytonstone, stating that he desired to tender for the supply of surgical dressings to the Workhouse, and, in accordance with the Board's advertisement, he went to the Workhouse to inspect samples. He, however, was unable to see them, and was treated with discourtesy by officials, who told him that it was useless for him to tender when "big London firms" were tendering. A member of the Board said he had received similar complaints from two other tradesmen. They desired to tender, and one of them, after being sent from one official to another, was ultimately told that he was a petty tradesman, and that it was useless to apply when big firms in London were tendering. The assistant storekeeper and the dispenser were both called before the Board, but denied any discourtesy, while the Workhouse master stated that there were no samples on view. Mr. Skinner: That's the thing. They were told to see samples, and because they came here and asked for them they were grossly insulted. Eventually the matter was referred to a committee, and the tender of the Hospitals and General Contracts Company (Limited) for surgical dressings was accepted.

#### Birmingham Notes.

Mr. T. H. Foden, pharmaceutical chemist, King's Heath, has effected an improvement in his window by the introduction of a system of plate-glass shelves, which show off his specialities to advantage.

A Walsall chemist, who is an M.P.S., wants to know whether the Pharmaceutical Society claims this title as exclusive property, for in his town there is a Philharmonic Society, whose members sometimes use the title.

At Birmingham on September 5, a trader named West was fined 10s. and costs for selling ground maize as arrowroot—"a very rare kind of adulteration, but a profitable one," according to Mr. J. F. Liverseege, the public analyst.

Mr. Bird, of custard-powder fame, has succeeded in persuading the Solihull authorities that it is to their advantage that he should do as he desires—viz., divert a certain road, and make a new one, and keep it in repair for twelve months.

The establishment of Messrs. Bird & Sons, Worcester Street, which for some time has been under the management of Mr. Charles Luckman, with qualified assistants, has passed into the hands of Mr. F. J. Mead. Mr. Luckman has gone to reside at Llandudno.

A small but good collection of miscellaneous drugs is to be seen just now in Messrs. Southall Brothers & Barclay's Bull Street shop-window. Amongst them are the usual show specimens of opium, bael-fruit, and the like. Most are contained in stoppered cylinders and mushroom-shaped glasses.

#### Stealing from Chemists.

Two boys, aged 9 years and 8 years respectively, were ordered to be birched at Chesterfield, on August 28, for

stealing two sticks of shaving-soap and one box of tooth-paste, value 1s. 2d., from Mr. G. P. Roe, chemist and druggist, Packers' Row, Chesterfield.

An errand-boy named Copsey (13), was charged at Westminster Police Court, on August 28, with stealing 10l. in gold, belonging to Mr. P. C. Baker, pharmaceutical chemist, Victoria Street, Westminster. He was sent to the bank with the money, but instead he bought a bugle and a mouth-organ, and went to Boxmoor. A Hertfordshire constable came across him, and after much questioning he confessed to the theft and was sent back to London. The boy was remanded for the attendance of his father.

At Plymouth Police Court on September 3, William Wilson (13) was charged with stealing a bottle of photographic developer, a bottle of perfume, and a bottle of toning-solution from the shop of Messrs. Turney & Sons, pharmaceutical chemists, Plymouth. Mr. J. D. Turney said he was convinced that there was a league of errand-boys who pilfered articles from different shops and exchanged them. He had no wish to unduly press the charge, but many articles had been missed. Wilson was ordered to receive nine strokes with the birch rod.

At Bromley on September 3, a youth named William Ernest Taylor was charged with stealing 6s. 4d. belonging to Mr. John Timmis, chemist and druggist, of 91 High Street, Beckenham. From the evidence of Leonard Chapple, Mr. Timmis's assistant, it appeared that the accused went to the shop, ordered 2 lbs. of cotton-wool, and asked that together with change for 10s., should be sent to Mrs. Little, of 39 Cedars Road, for Dr. Corbin. The cotton-wool and 6s. 4d. change was sent to the address given by an errand-boy who, on the way, was met by the accused. Prisoner obtained the change from the boy, telling him to wait until he got the half-sovereign. Prisoner disappeared, but was arrested the next day. It was stated that prisoner had defrauded over a dozen chemists at Beckenham and Sydenham in a similar manner. He was sentenced to six months' imprisonment.

#### Poisoned by Absorption.

At the City Coroner's Court on September 8, Mr. F. D. Thomas, the Deputy Coroner, held an inquiry respecting the death of Thomas Phillips (43), a foreman employed by Messrs. Penrose & Co., wholesale chemists, of 109 Farringdon Road, E.C. Deceased was filling Winchester-quart bottles with glacial acetic acid from a carboy on August 25, when he fell down, smashing the Winchester he was filling, and lay on the floor just beneath the tap of the syphon, which was running a stream of acid from the carboy. He was removed to St. Bartholomew's Hospital, where he died on September 4. Dr. John Dawson Hartley, house surgeon at St. Bartholomew's Hospital, said deceased was burned on the face, eyes, arms, chest, neck, and legs, and had he lived he would have been horribly disfigured. Death was due to septic poisoning, following the burns.

#### The Week's Poisonings.

The singularity about the poisoning fatalities during the past week has been not so much their number as their character. Thirteen deaths by poison have taken place, six of which were caused by the unscheduled poisons—sulphuric acid (3), acetic acid, paraffin, and laburnum-seeds. The use of sulphuric acid is uncommon, but that corrosive acid was taken by a charwoman at Kentish Town, by an engineer at Stoke Newington (in mistake for whisky), and by a West-end parlourmaid, who mixed it with hydrochloric acid as well. At the inquest on the servant, at the Hammersmith Coroner's Court, it was stated that the poison was found in an ordinary quarter spirit-bottle, and labelled "Vitriol." The purchase could not be traced. A Juror: Was it bought at a chemist's? The Coroner: I should think not. This is one of those dangerous poisons that can be bought or sold by anyone. It is used in trade. The Juror: Don't you think the seller ought to be more careful? The Coroner: It is a highly dangerous poison. Although there are restrictions on the sale of most poisons, others can be sold without any restrictions. This stuff was used in trade, and cannot be restricted too much. The Juror: I think it ought to have been labelled, with the name and address of the seller, and then we could have had the evidence here. The person



should know to whom he was selling and what it was wanted for before it is sold. The Coroner: Until quite recently carbolic acid could be sold indiscriminately in the same way; but now it is restricted, and I think the sale of this poison should also be restricted in the same way. The jury eventually added a rider, calling public attention to the danger of allowing deadly poisons to be sold in such a haphazard way, and expressing the opinion that restrictions should be placed on its sale.—The acetic acid was taken by a child at Manchester. He drank from a gallon bottle kept for making vinegar at a fried-fish shop.—A child at Islington drank paraffin with fatal results, and a 4-year-old boy at Hinckley ate some laburnum-seeds, and died the same night.—The scheduled poisons include carbolic acid (2), cyanide of potassium (2), laudanum, oxalic acid, and chlorodyne. The last-named was taken in overdose by a man at Tunbridge Wells, the oxalic acid by a City man, and the laudanum by a female dipsomaniac at Fulham. At the inquest, on September 6, it was stated that the deceased woman used to take three or four sulphonal tablets (5-gr.) to induce sleep. Two days before her death she was found seriously ill. She told her husband she had taken half a bottle (a large size) of sulphonal tablets and laudanum. Medical aid was unavailing, and she became more comatose, and died. Dr. Morley said there were all the characteristics of opium-poisoning. The Coroner's officer found in her room a tablet-bottle and a bottle labelled "Laudanum—poison. West Kensington Drug-stores. F. P. Drabble, 1 Baron's Court Road, West Kensington." The servant at the house said she purchased the laudanum a month before to use for toothache. The Coroner said he did not require the evidence of the chemist. A juror asked if there were not certain precautions to be taken by the chemist. The Coroner said the chemist had taken all the precautions required by the Act by labelling the bottle with his name and address and the word "Poison."—The cyanide was taken by a man at Cambridge and an unknown man at Hampstead. The report of the inquest on the latter stated that "broken tablets" were found in the pocket of the deceased man. These "tablets" were examined by the police-surgeon, "and found to contain 50 per cent. of cyanide of potassium." As Messrs. Burroughs Wellcome & Co. do not make a cyanide tablet, we have made inquiries, and find, on the authority of the Coroner, that what was found in the pocket of deceased was nothing more or less than chunks of pure cyanide. The "tablet" idea appears to have existed merely in the imagination of the reporter.

## Irish News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

### The Municipal Technical Institute, Belfast.

In last week's issue the name of this Institute was not marked with an asterisk to indicate that it is one of those whose certificates of botany and materia medica are accepted from candidates for the Irish Pharmaceutical Licence examination.

### Other People's Bottles.

At Belfast Police Court on September 5, the Provincial Mineral-water Company (Limited) was fined 5*l.* and costs for bottling aerated waters in bottles which had other makers' names upon them. Action was taken by the Belfast Bottle Exchange under the Merchandise-marks Act.

### Pharmaceutical Council Election.

Much interest is taken in Irish pharmaceutical circles in the approaching annual elections, and comment is rife as to the personality of the new President. Already several "outlanders" have been named, and in one case at least pressure is being brought to bear on an erstwhile "strong man" of pharmacy to again take up the reins of government, but up to the present no promise in the matter can be extracted from him.

### October Pharmaceutical Examinations.

All applications for the undermentioned examinations must be lodged with the Registrar by 11 o'clock A.M. on the following dates: For Preliminary examination, by Tuesday morning, September 23; for Pharmaceutical Licence examination, by Wednesday morning, September 24; for Pharmaceutical Assistant examination, by Monday, September 29; for Registered Druggist examination, by Tuesday, September 30.

### Not the Sodium Salicylate.

At Dublin last week an inquiry was held regarding the death of William La Touche. It appeared from the evidence that deceased became suddenly ill at his lodgings after taking some salicylate of sodium which he had purchased in tablet form at Dr. Barnes' Medical Hall, Charlemont Street. Deceased rang the bell for his servant, who found him leaning against a table in a weak and paralysed condition. He handed her the phial of tablets, and told her to send for Dr. Barnes as "he had taken the wrong medicine." He was removed to the Meath Hospital in a comatose state, and he died in the institution on September 4 without having recovered consciousness. It was proved in evidence that nothing of a poisonous nature had been found in deceased's rooms, and that the taking of sodium salicylate was but coincident with the onset of his illness, which the *post-mortem* examination showed to be thrombosis and congestion of the brain. The jury returned a verdict of death from natural causes. Mr. John Walker, solicitor, watched the case on behalf of Dr. Barnes, and also the manufacturers of the goods supplied to deceased.

### Belfast Workhouse Medicines.

Excessive expenditure on medicines and surgical appliances at the Belfast Workhouse infirmary has resulted in an official inquiry by Dr. Smyth, medical inspector of the Local Government Board, whose report has just been published. It shows that the expenditure increased from 376*l.* 1*s.* 6*d.* for the six months which ended September, 1899, to 860*l.* 4*s.* 7*d.* for the six months which ended March, 1902. The L.G.B. condemns the action of Messrs. Clarke & Co. in entering into a separate contract and charging special prices for articles already in the formal contract, and disallows recoupment of 427*l.* 11*s.* from local taxation. Some of the items in Dr. Smyth's report show extraordinary waste. Thus lint was used to wash patients' faces, 252 clinical thermometers were supplied in six months, 157 pairs of scissors, and 25,632 safety-pins. Although the apothecary did not use more than 2*s.* 2*d.* worth of sugar in six months, 30 cwt. 84 lbs. was supplied at a cost of 50*l.* 4*s.* 6*d.* It was issued chiefly for domestic purposes to the value of 40*l.* 3*s.* 8*d.*, but the grocery-contract would have placed it at 28*l.* 13*s.* 11*d.* Sodium bicarbonate to the extent of 700 lbs., costing 17*l.* 10*s.*, was supplied for baths; the apothecary used none of it. During the six months 526 gals. of carbolic acid, at 6*s.* a gallon, was supplied (the proper price is 2*s.* 6*d.* a gallon). The following are other items which Dr. Smyth considers cause for serious complaint:—

Phenyl was charged for at 20*s.* per gal. The contractor admitted that the Guardians could have obtained it at 3*s.* 9*d.* per gal. in 40-gal. casks.

Kali-water.—This was not only indefensibly extravagant in price, but extravagant in the quantity consumed; 248 syphons were used during the six months.

Igazol and Glanduline.—The cost of both should not have been incurred.

Tablets.—The amount for these was 21*l.* 14*s.* 6*d.* This was a very unjustifiable expenditure.

Creoline was used to an excessive amount.

Invalid bovril has been used to an extravagant extent.

Benger's food was used in excessive quantity.

Air-cushions were, in my opinion, recklessly ordered. A cheap kind at 3*s.* 6*d.* was contracted for, and an expensive kind at 8*s.* 6*d.*, 11*s.*, and 12*s.* 6*d.* was in every instance obtained.

Spittoons were contracted for 3*s.* 6*d.* per doz., and supplied at 18*s.* per doz.

At a meeting of the committee of the Board of Guardians last week a letter from Messrs. Clarke & Co., the contractors, was submitted in which they repudiated any liability in connection with the matter, they having supplied the articles *bona fide* according to the list as furnished to them from the Union.



It stated, however, that they are prepared to indemnify the Guardians against any surcharge which may be made as a result of the inquiry by the Local Government Board. It was decided to adopt recommendations suggested by the contractors, to draw up a report for presentation to the Local Government Board, subject to approval by the Guardians.

## Scotch News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

### Conference Reminiscences.

The meeting of the B.P.C. at Dundee is still agitating Scottish journalism. In a recent issue of the *Scotsman* a writer refers to Mr. Druce's study of George Don, the Forfarshire botanist, in an article on "The Poor Man of Genius." The *Scotsman* writer speaks appreciatively of Mr. Druce's defence of Don, saying that Don's fate "to die destitute and broken-hearted at the age of 50 is more typical of the lot which awaits a poor man of genius than Hugh Miller's, who died at the same age, in a high position of society." A well-written article (presumably by a lady) appeared in the *Arbroath Herald* of August 21. The writer describes, in a column and a half, her impressions when visiting St. Fillans with the British Pharmaceutical Conference. The peroration is piquant, with the proper touch of pathos. ]

There was one very handsome young gentleman in the company, but I confess to have always had a greater admiration for the sort of handsomeness that goes with the silver halo of snowy hair—the sense of perpetual youth and ever-green prime that comes with clear-eyed, erect, and indomitable advancing years. Two such were of this company, whose kindly smile, free from the immature self-consciousness of youth, dwells in the mind as the sunny remembrance of a snowy spring. There were many in this goodly company whose friendship one felt would have been a lovely and desirable thing, and as one grasped for the first and last time the hand of some who for one day in life had been our closest companions, one thought a little sadly of the "ships that pass in the night," and wondered should we ever meet again.

There appears to be material for a whole romance in that short paragraph.

### Glasgow Notes.

The local schools of pharmacy are again in full swing, and, judging from the roll of students, the new Preliminary has not yet begun to thin the ranks of aspirants for the qualification.

According to all accounts the Trade Association's price-list is being well maintained, but the shop-hours of chemists in most districts show a steady tendency to extension rather than restriction.

After the terrible car accident in Renfield Street on Saturday night, September 6, many of the injured were carried to the pharmacy of Mr. G. Mackie, Renfield Street, to receive first aid.

As the result of the statement made some time ago by the Emeritus Professor Sir Wm. Gairdner, of Glasgow University, as to the impossibility of getting genuine brandy even at a fancy price, and the equal efficacy of whisky as a medicinal stimulant, brandy has been banished from most of the local hospitals.

¶ The Glasgow and West of Scotland Pharmaceutical Association is about to enter on a period of renewed activity. Efforts are being made to organise a series of meetings, to be addressed by representative men, during the winter session, and altogether there are good prospects of a revival of the Association's former vitality and prestige.

¶ The Southern Medical Society has had two sub-committees sitting for six months, but neither has hatched anything so far. One was appointed to draw up a list of scheduled poisons and their preparations, but is still pondering the problem, "What is a poisonous alkaloid?" and to the other was assigned the task of compiling statistics as to the abuse of medical charities in Glasgow.

Dr. Wm. Findlay, of Dennistoun, who has won more than local literary reputation under the *nom de plume* of "George Umber," is about to publish a collection of verses, to which he has given the title of "Carmina Medici." Many of the poems have already appeared in the local Press, and their themes are mostly professional. As the Doctor prefers the Doric a copious glossary will be appended.

The *doyen* of Glasgow physicians, the well-known Dr. John Burns, of Bridgeton, has just celebrated his eighty-seventh birthday. He was born at Perth in 1815, at a time when the town prison was filled to overflowing with French prisoners of war. He became a licentiate of the ancient Medical Faculty, of which he is now a Vice-President, in 1846, and qualified as a Fellow in 1851. When he started practice in Bridgeton, in 1846, it was the chief seat of the cotton-spinning industry in Scotland, and blood-letting and blistering were still the prevailing medical fashions. In his time Glasgow has grown from being a moderate-sized town of the *rus in urbe* type to be one of the greatest and grimest cities of the Empire.

## French News.

(From our Paris Correspondent)

DANVAL AGAIN!—M. Danval has evidently been marked by the hand of Destiny for an adventurous career. Hardly has he reached Paris and been installed, with his family, in the hospitable villa of his champion (Jacques Dhur) at Colombes than he narrowly escapes death by fire. Last week his daughter fell asleep while reading a newspaper, which touched a candle, ignited, and set fire to the bed-curtains. Luckily M. Dhur was walking in the garden, saw the blaze, and rendered assistance until the fire-brigade arrived. MM. Danval and Dhur escaped with singed hair and beards, but the clothes of the Danval family were burnt, and M. Dhur is not insured.

A CHARCOAL-TRAGEDY.—A new pharmacist, evidently of provincial origin, recently opened shop in the Petit-Montrouge quarter. The neighbours noticed he made frequent visits to a modest chamber in the rue du Coëdic, not far away, and seemed on the best terms with the younger of two women who lived there, and who had arrived in Paris earlier than himself. A few days ago much excitement was caused in the rue Coëdic by the arrival of a cab containing two police officials, who mounted to the room in question, while the pharmacist nervously paced the pavement outside. A city ambulance followed, into which two apparently lifeless female forms were lifted, and conveyed to the Hôpital Cochin. It appears the pharmacist had received a note from Mlle. Parizot containing a threat to destroy herself. He communicated it to the police, with the result reported. The younger woman's life is saved, but the mother died on arrival at the hospital. The usual charcoal-brazier was burning in their room when the police arrived.

NEW PROFESSORS.—The scholastic vacation is usually marked by the nomination of a certain number of professors. M. Perrot, the new professor of *materia medica* at the Paris School of Pharmacy, is one of the most brilliant of the younger *savants* of the school, and his friends predict for him a career not less successful than, and a popularity equal to, that of his illustrious predecessor, M. Gustave Planchon. He conducted the practical micrography classes at the school for some years, and in 1899 was nominated assistant-professor of botany.—M. Henri Coutière, who has succeeded the late Alphonse Milne-Edwards as zoology professor at the Paris School of Pharmacy, has been assistant-professor since 1899. He is an ex-student of the school, and has, like many of its aptest scholars, spent his student-days as an "interne" in the pharmacy of one of the Paris hospitals.—M. Guérin, who has been appointed to the chair of toxicology and chemical analysis at the Nancy Superior School of Pharmacy, was assistant professor at the Faculty of Medicine in that town. M. Grelot has been nominated professor of galenic pharmacy at the same school, and M. Favrel professor of chemistry. M. Gérard, the new professor of pharmacy at the Mixed Faculty of Medicine and Pharmacy at Lille, is the author of the new work "Pharmacy Manipulation," a text-book for students, published as one of the series forming the "Pharmacy Students' Library."



## South African News.

(From our Correspondents.)

**A HOSPITAL APPOINTMENT.**—Mr. H. W. Clark, of Forfar, Scotland, who for some time was a compounder in the Hospital Train service, has been appointed assistant dispenser in No. 7 General Hospital, Pretoria.

**NEW CAPE DOCTORS.**—Licences to practise as medical men in the Cape Colony have been issued to William Alexander Twigg, L.R.C.P.I., L.R.C.S.I. (late of Dungannon, Co. Tyrone, Ireland); Thomas Bonnar Garvie, M.B., B.S. (formerly Civil Surgeon, Field Force, S. Africa); George Corolin, M.R.C.S., L.R.C.P. (formerly of Boscombe, England).

**FRAUD BY A CHEMIST.**—William Alexander Henry, described as a chemist, was charged at Johannesburg last month with fraud, by uttering cheques on the Standard Bank at Potchefstroom, knowing at the time the cheques were given, that he had no funds at the bank, and that the cheques would not be paid on presentation there. A sum of 59*l.* was involved. After evidence had been heard, the Court found the accused guilty, and passed sentence of nine months' hard labour.

**"THE FOOD WE EAT."**—This was the subject of a lecture by Mr. C. F. Juritz, M.A., Senior Cape Government Analyst, given at the Y.M.C.A., Cape Town, last month.



MR. C. F. JURITZ, M.A.

Throughout the lecture more stringent legislation for the suppression of food adulteration was advocated, as well as more severe exercise by magistrates of their privileges in imposing the maximum penalty of 20*l.* for an offence. A barefaced exposure of "fresh" butter, emanating from a local establishment, in which the lecturer stated that he was financially interested, and which proved to be "worse than Australian butter," was greatly appreciated by the audience. The sample, which was freshly purchased, was proved to contain colouring-matter as well as boric acid while some Danish butter passed the tests. Mr. Juritz, whose portrait we give, was educated at South African College, and was Queen's scholar in 1878. He matriculated at C.G.H. University, with honours, in 1881, and was awarded the Jameson exhibit scholarship. He headed the Intermediate examination in Arts honours list in 1883, getting a University exhibition and the Governor's prize of S.A. College. He graduated B.A. with honours in the department of mathematics and natural science at the University in 1885, and took his M.A. in the department of chemistry in 1886. In the same year he was elected a Fellow of the University, and was temporarily engaged by the Government to perform analyses of tobaccos and tobacco-soils of Cape Colony. He was appointed tutor in science in the Government Agricultural School, Somerset East, in 1890. This appointment was subsequently revoked, and instead of proceeding to Somerset East, Mr. Juritz was retained by the Government at Cape Town in connection with the Health Department of the Colonial Secretary's Office. He was appointed senior analyst in charge of the Government Analytical Laboratory, Cape Town, in 1891; acted as mathematical and chemistry examiner to C.G.H. University from 1892 to 1896. Amongst his publications are "Chemical Composition of Colonial Fodder, Plants, and Woods," 1890; "Course of Inorganic Qualitative Chemical Analysis," 1890; and "Chemical Com-

position of Soils of South-Western Districts of Cape Colony," 1900.

**CAPE PHARMACY BOARD.**—The report for 1901 refers to the resignation by Mr. Rendell, of the Colonial Secretary's Office, of the duties of Secretary, which he had performed for more than seven years. The Board records its appreciation of the very able manner in which Mr. Rendell carried out his share of the work of the Board. Mr. F. H. le Sueur, of the Colonial Secretary's Office, was appointed Secretary on May 24. Eight Executive meetings were held during the year. The ordinary meetings were all held at Cape Town, and the new regulations came into force, whereby (a) examinations to be held only at the May and November meetings and (b) examinations to be both written and *viva voce*. Only four candidates presented themselves for examination, and two passed and two failed. The number of persons registered during the year was ten, compared with six in 1900, and ten in 1899. One certificate was refused registration, it being presented from New Zealand, with which colony the Cape has not yet arranged reciprocity, but steps are being taken that this may be accomplished. The Board has had under consideration the matter of admitting certificates of qualification from countries which do not, in some degree, recognise Cape certificates; and correspondence is now being carried on with several countries with special relation to this subject. A motion has been passed and presented to Government, "That, in the opinion of the Board, the time has arrived for a general Pharmacy Board for the whole of British South Africa." This is now receiving the attention of the Government.

## Colonial and Foreign News.

**A NEW USE FOR SEN-SEN.**—Sen-sen is coming into vogue in the better-class Hindoo circles, as an addition to the national Pān sopari. So writes our Bombay correspondent.

**IMPORTANT TARIFF-DECISION.**—The Board of Classification of the United States General Appraisers have decided that fish-sounds used in making isinglass are free of duty (see *C. & D.*, August 23, page 333). This decision is one of considerable importance to manufacturers and dealers in isinglass, and reverses the collectors' decision of a 25-per-cent. duty, which would have prevented importers from sending out agents in the Russian provinces to buy the crude sounds.

**SOAP-FACTORY IN VLADIVOSTOCK.**—A new soap-factory has been opened at Vladivostock. Most of the soap has heretofore come from European Russia. The owner lately sold 2,000 poods (72,224 lbs.), and has 4,000 poods (144,448 lbs.) in stock. He makes three qualities of soap—blue, yellow, and green. After building his factory, the owner found that the necessary fat had to come from abroad, and there was an almost prohibitive duty on it. An appeal to St. Petersburg resulted in a decree permitting the fat to be imported duty-free.

**THE "WASHING-CRYSTALS" CASE.**—Mr. E. L. Fleming, the managing director of Bishop & Co. (Limited), borax-manufacturers, Warrington, has returned from the United States "jubilant about his victory over the Borax Trust," says the *Liverpool Courier*. It will be remembered that Mr. Fleming was arrested in connection with the importation of washing-crystals and afterwards acquitted. It is difficult, however, to see where the victory comes in, as we understand Mr. Fleming will not be able to continue his shipments of borax and soda as "washing-crystals" at 25 per cent. *ad val.*

**DUTY-FREE ETHER FOR COCAINE.**—Sulphuric ether required in the preparation of cocaine is now exempt from Customs duties in the Netherlands. The Minister of Finance, to whom demands for exemption have to be addressed, determines the quantity admitted on each occasion. Conveyance of the liquid to the factory is effected under seal, and under the supervision of the Customs officials, in whose presence the liquid is immediately mixed with 250 grams (8.8 oz.) of petroleum ether (furnished by the collector of Customs at the expense of the manufacturer) to every kilogram (2.2 lbs.) of sulphuric ether.



## Australasian News.

Chiefly from "The Chemist and Druggist of Australasia,"  
August 1, 1902. 6d. per copy, post free.

**TARIFF-DECISIONS.**—A list is given of decisions during July by the Commonwealth Customs Department.

**MESSRS. PARKE, DAVIS & Co.** have opened a Sydney depot at 6 O'Connell Street, under the charge of Mr. Cyril C. Murray, Australasian manager of the firm.

**AN ETHICAL VIEW OF COUNTER-PRESCRIBING** was contributed by Mr. A. B. Cowling to the annual meeting of the Pharmaceutical Society of South Australia, and is printed in the *C.D.A.*

**THE AUSTRALASIAN PHARMACEUTICAL FORMULARY**, which has been published since the last issue of the *C.D.A.*, is practically the Victorian one which was published last year. It is now republished under the authority of the Pharmaceutical Societies of Australasia, New South Wales, South Australia, Western Australia, and Queensland.

**BRANCH SHOPS IN VICTORIA.**—The Pharmacy Board of this colony reports that unregistered persons are acting as managers of branch shops, notwithstanding that a circular was issued some months ago drawing attention to the fact that it is a breach of the law to carry on a branch shop unless under the management of a registered person. The Board has resolved to take further action in the matter.

**THE BRITISH PHARMACOPEIA OF 1898** has not yet been firmly established in New South Wales. It appears, from a statement made by Mr. Matthews at the July meeting of the Pharmaceutical Council in Sydney, that two-thirds of the chemists in the colony are using the old edition. Mr. Short said 90 per cent. of the chemists will not take the new tincture of nuxvomica. Altogether the conditions are bad, and it was decided to write to the Board of Health pointing out the dangers of the present state of affairs to the public, and asking them to communicate with the Medical Association, emphasizing the importance of the matter being placed beyond doubt.

**PHARMACEUTICAL EXAMINATIONS IN MELBOURNE.**—At the July meeting of the Pharmacy Board of Victoria a deputation from the Pharmaceutical Council called to complain about the chemistry questions set at the June examination for the certificate of the College of Pharmacy. It was said the questions were too scientific. That was not the opinion of the Board—indeed, Mr. Blackett said it was a very fair paper, which was later emphasised by his remark that he had always considered a ten-months' curriculum too short, Mr. Church capping this by saying, "We want at least two years." It appeared from a statement by the Secretary (Mr. Shillinglaw) that, of the eleven candidates who presented themselves, two withdrew from the examination. Several others had been up before and failed badly in all subjects; eight out of the total number were College students. The talk was inconclusive, for the deputation gracefully left the matter in the hands of the Board.

**ANNUAL MEETINGS.**—The Canterbury (N.Z.) Pharmaceutical Association met on July 4, when Mr. Papprell (the President) submitted a satisfactory report for the year, dealing with all the departments of work, which, we are glad to notice, include amusements as well as education, trade, and cognate matters. The following office-bearers were elected for the ensuing year: Messrs. Papprell, President; Stuart Ross and Berry, Vice-Presidents; Smith-Ansted, Secretary and Treasurer; Len. Bonnington, Auditor; committee, Messrs. Barrett, Sopp, R. S. Cooke, Todd, Price, Kiver, and Hobden.—The annual meeting of the Pharmaceutical Society of South Australia was held at Adelaide on July 27, Mr. H. Bickford presiding. In the course of his address the Chairman, referring to reciprocity, said:—

This is a subject that requires handling diplomatically. We should have an interchange of pharmacy-certificates, and I am quite content to leave it with our Board to carry it through, and feel certain I am uttering the feelings of all members when I say it is the wish and desire that reciprocity should take place with the Australian States, and when it is an accomplished fact the Pharmaceutical Society of Great Britain will willingly and cheerfully accept our certificates and we theirs.

The financial statement showed that the funds of the Society have grown during the year.

## American Notes.

**MERELY BLUBBER.**—The fishermen of a Boston (Mass.) steamer recently brought into port a big lump of what they fondly imagined was ambergris. Their visions of a small fortune were soon dissipated when an expert pronounced their find to be a chunk of whale's blubber.

**SULPHURIC-ACID MANUFACTURE.**—A company has been formed in Terre Haute, Ind., with a capital of \$50,000, for the purpose of manufacturing sulphuric acid from pyrites. It is known as the Indiana Pyrites Company. A mill will be built in a short time either in Terre Haute, Clinton, or Fontanet. One thousand tons of pyrites will be cleaned a week. Practically the same business is being carried on at Terre Haute by Mr. R. W. Prescott, the president of the company, at the present time, and about 250 tons of pyrites are cleaned a week.

**THE CHEMIST WINS.**—Victor I. Altschul, a Jersey City druggist with two stores, was arraigned in the First District Court on August 12, charged by the State Board of Health with selling tincture of iodine not up to the standard required by the United States Pharmacopoeia. The druggist acted as his own lawyer. Judge Crouse decided in favour of the defendant on the technical point that the inspector did not comply with the law in collecting the samples. He had allowed the druggist to put up two 2-oz. bottles and keep one. He should have bought a quantity and divided it, leaving one-half with the druggist.

**ANTI-SUBSTITUTION.**—Some proprietors of nostrums have recently begun a campaign of interviews and advertisements in the daily newspapers with reference to substitution by druggists. These are so grossly unfair that the Secretary of the N.A.R.D. has protested, and there is evidence of climbing down on the part of the instigators of the vilification. [This appears to have some connection with the efforts in the same direction at present made here. Several subscribers send us this week a page from *Advertising* containing the *N. Y. Journal* thief cartoon—an unsavoury morsel that is being made the most of here.—EDITOR.]

**COMBINES AND COMPANIES.**—Last month the American Witch Hazel Corporation was formed in Jersey City with a capital of \$4,000,000, in \$1 shares. The incorporators are Messrs. E. L. Conklin (Newark), B. Sheridan (Newark), E. D. W. Langley (New York), F. E. Fontaine (Newark), and F. J. Weiss (Newark). The objects of the company are to manufacture, distil, and sell extract of witch-hazel and other products of the distillation of any kind of wood; also to deal in soaps, lotions, and liniments. It is thought the new corporation will merge several of the best-known companies now engaged in the manufacture of witch-hazel. The offices of the corporation are at No. 170 Broadway, New York.

**SEPARATING THE SEXES.**—Mr. A. S. Brand, of Opelousas La., has built a new pharmacy which has some claim to originality. It is a double store, constructed with an arch above each door, the right-hand entrance being to "The Ladies' Pharmacy" and the left-hand to "The Gentlemen's Pharmacy." Between the two doors appears the name of the firm. A distinct separation of the two departments is made, the partition being shelved, with transparent glass doors opening into both departments, for keeping the shop-rounds. These bottles are labelled on both sides so that assistants can get them without leaving their particular department. In front of this separation the soda-fountain is placed, with a door communicating with both departments. The dispensing-counter is behind the partition, and there prescriptions for both departments are compounded. The ladies' department has a lady pharmacist in charge, of course, while male clerks look after the men. In the front of the store, between the arches, a little horseshoe-shaped parlour is fitted up for the convenience of couples desirous of drinking soda or eating ice-cream.

Of chemicals and perfumery 41.986% worth were imported into Suez last year. Of this amount 21.875% was derived from British possessions in the Far East, and the rest from Turkey, China, and Persia.



# British Association for the Advancement of Science.

BELFAST, SEPTEMBER 10, 1902.

PROFESSOR JAMES DEWAR, M.A., LL.D., F.R.S., the President, opened the proceedings of the seventy-first annual meeting at Belfast, on Wednesday evening with an address, which he started by congratulating King Edward VII. on his recovery. "No one in his wide dominions is more competent than the King," he said, "to realise how much he owes, not only to the skill of his surgeons, but also to the equipment which has been placed in their hands as the combined result of scientific investigation in many and diverse directions. He has already displayed a profound and sagacious interest in the discovery of methods for dealing with some of the most intractable maladies that still baffle scientific penetration; nor can we doubt that this interest extends to other forms of scientific investigation." Professor Dewar then referred to prominent members of the Association who have passed away since the last meeting—viz., Mr. George Griffith (the Assistant General Secretary), Sir Joseph Gilbert, and Professor Alfred Cornu—and proceeded to deal in succession with the following topics:—

The progress of Belfast.  
Tyndall and evolution.  
The endowment of education.  
Applied chemistry: English and foreign.  
History of cold and the absolute zero.  
Liquefaction of gases and continuity of state.  
Liquid hydrogen and helium.  
The upper air and auroras.  
Various low-temperature researches.

The address in full would occupy about half a number of THE CHEMIST AND DRUGGIST. Few may care to read it right through, but the following are excerpts which are well worth ten minutes' consideration:—

## THE NATION MUST "WAKE UP."

Belfast may plead with some justice that it, at least, has never gone to sleep. It now ranks as one of the eight largest cities in the United Kingdom. Compared with the early fifties, when iron shipbuilding was begun on a very modest scale, the Customs collected at the port have increased tenfold. Since the introduction of the power-loom, about 1850, Belfast has distanced all rivals in the linen-industry, which continues to flourish, notwithstanding the fact that most of the raw material is now imported, instead of being produced, as in former times, in Ulster.

## TYNDALL'S ADDRESS AT BELFAST IN 1874

dealt with the changing aspects of the long-unsettled horizon of human thought, illuminated by the sunrise of the doctrine of evolution. The consummate art with which he marshalled his scientific forces for the purpose of effecting conviction of the general truth of the doctrine has rarely been surpassed. Tyndall's views as a strenuous supporter and believer in the theory of evolution were naturally essentially optimistic. His writings abundantly prove that he had faced the great problems of man's existence with that calm intellectual courage, the lack of which goes very far to explain the nervous dogmatism of nescience. His honourable admission that, after all that had been achieved by the developmental theory, "the whole process of evolution is the manifestation of a power absolutely inscrutable to the intellect of man," shows how willingly he acknowledged the necessary limits of scientific inquiry. His conclusion was at the time thought to be based on a too insecure projection into the unknown, and some even regarded such an expansion of the crude properties of matter as totally unwarranted. Yet Tyndall was certainly no materialist in the ordinary acceptance of the term. . . . The essential condition of progress is that we should generalise to the best of our ability from the experience at command, treat our theory as

provisionally true, endeavour to the best of our power to reconcile with it all the new facts we discover, and abandon or modify it when it ceases to afford a coherent explanation of new experience. The evolutionary doctrine leads us to the conclusion that life, such as we know it, has only been possible during a short period of the world's history, and seems equally destined to disappear in the remote future; but it postulates the existence of a material universe endowed with an infinity of powers and properties, the origin of which it does not pretend to account for. The enigma at both ends of the scale Tyndall admitted, and the futility of attempting to answer such questions he fully recognised.

## THE ENDOWMENT OF EDUCATION.

The munificent benefactions to science and education by Mr. Cecil Rhodes and Dr. Andrew Carnegie having been referred to, Professor Dewar said nothing will more powerfully further leadership in the domain of discovery and the utilisation of new forces than attention to the injunction to lay hold of the exceptional man whenever and wherever he may be found, and, having got him, to enable him to carry on the work for which he seems specially designed. That means, he imagined, a scouring of the old world, as well as of the new, for the best men in every department of study—in fact, an assiduous collecting of brains similar to the collecting of rare books and works of art which Americans are now carrying on in so lavish a manner. As in diplomacy and war, so in science, we owe our reputation, and no small part of our prosperity, to exceptional men; and that we do not enjoy these things in fuller measure we owe to our lack of an army of well-trained ordinary men capable of utilising their ideas. Our exceptional men have too often worked in obscurity, without recognition from a public too imperfectly instructed to guess at their greatness, without assistance from a State governed largely by dialecticians, and without help from academic authorities hidebound by the pedantries of mediæval scholasticism. For such men we have to wait upon the will of Heaven.

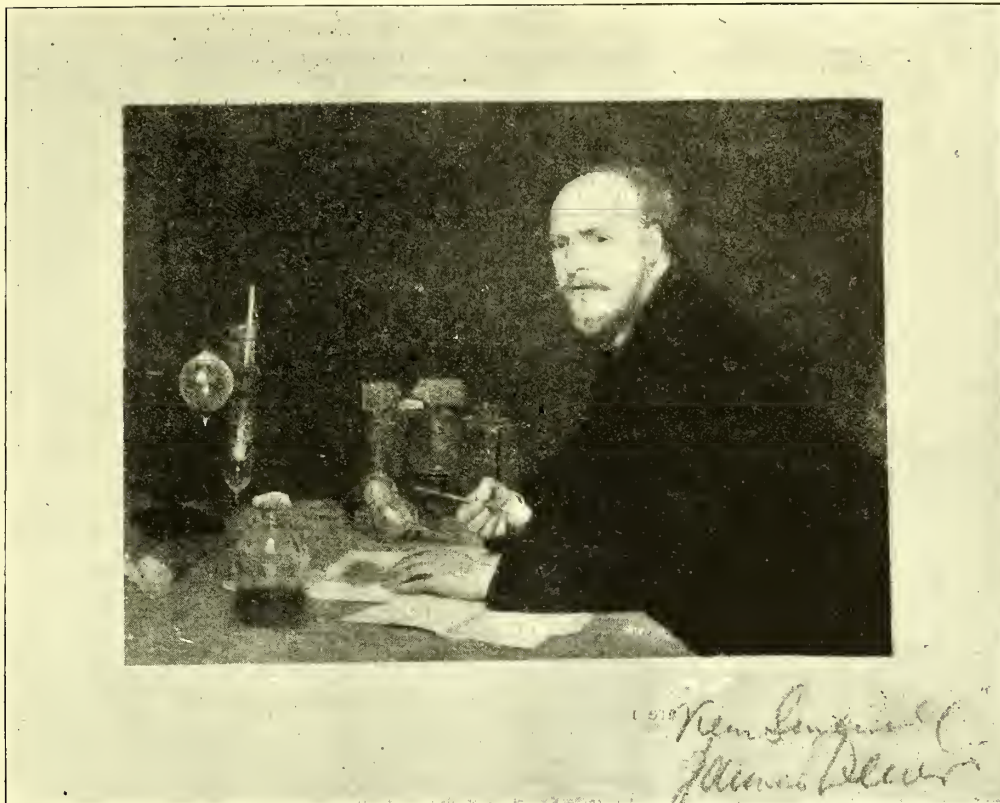
## THE WORK DONE AT THE ROYAL INSTITUTION

during the past hundred years is a fairly definite quantity in the mind of every man really conversant with scientific affairs, and illustrates the foregoing enunciation. Professor Dewar obtained from the books accurate statistics of the total expenditure on experimental inquiry and public demonstrations for the whole of the nineteenth century. The items are:—

	£
Professors' salaries—Physics and chemistry	54,600
Laboratory expenditure	24,430
Assistants' salaries	21,590
Total for one hundred years	100,620

In addition, the members and friends of the Institution have contributed to a fund for exceptional expenditure for experimental research the sum of 9,580/. It should also be mentioned that a Civil List pension of 300/. was granted to Faraday in 1853, and was continued during twenty-seven years of active work and five years of retirement. Thirty-two years in all, at 300/. a year, make a sum of 9,600/., representing the national donation, which, added to the amount of expenditure just stated, brings up the total cost of a century of scientific work in the laboratories of the Royal Institution, together with public demonstrations, to 119,800/., or an average of 1,200/. per annum. If you recall the names and achievements of Young, Davy, Faraday, and Tyndall, you will come to the conclusion that the exceptional man is about the cheapest of natural products.





PROFESSOR JAMES DEWAR, F.R.S.

(From the painting by Mr. W. Q. Orchardson, R.A., in Peterhouse College, Cambridge.)

Professor Dewar was born at Kincardine-on-Forth on September 20, 1842. He began his education at Dollar Academy, and thence he proceeded to Edinburgh University, where he studied science. In 1867 he was appointed assistant to Lyon Playfair, then Professor of Chemistry in the University, and succeeded Dr. J. H. Gladstone as Fullerian Professor of Chemistry in the Royal Institution, 1877. He is also Jacksonian Professor of Experimental Philosophy at Cambridge University, and Professorial Fellow of St. Peter's College there.

#### GERMANY AND BRITAIN.

In 1901 there were 4,500 trained chemists employed in German works. It is difficult to give perfectly accurate figures for this country, but a liberal estimate places the number of works-chemists at 1,500, while at the very outside it cannot be put higher than between 1,500 and 2,000. German chemists are, on the average, as superior to British chemists in technical training and acquirements as they are numerically. Of 633 chemists employed in German works 69 per cent. hold the degree of Ph.D., about 10 per cent. hold the diploma of a technical high school, and about 5 per cent. hold both qualifications. Of 500 chemists in British works only 21 per cent. are graduates, while about 10 per cent. hold the diploma of a college. The whole value of German chemical industries is fifty millions sterling per annum. These industries are very largely founded upon basic discoveries made by English chemists, but never properly appreciated or scientifically developed in the land of their birth. Friedrich Bayer & Co. employ 5,000 workmen, 160 chemists, 260 engineers and mechanics, and 680 clerks. In one of the factories the works and plant stand in the books at 1,500,000 $\frac{1}{2}$ ., while the money actually sunk in them approaches to 5,000,000 $\frac{1}{2}$ . In other words, the practical monopoly enjoyed by the German manufacturers enables them to exact huge profits from the rest of the world, and to establish a position which, financially as well as scientifically, is almost unassailable. The fundamental discoveries upon which this gigantic industry is built were made in this country, and were practically developed to a certain extent by their authors.

#### WHAT IS THE EXPLANATION?

Want of education. We had the material in abundance, when other nations had comparatively little. We had the capital, and we had the brains, for we originated the whole thing. But we did not possess the diffused education, without which the ideas of men of genius cannot fructify beyond the limited scope of an individual. It is in the abundance of men of ordinary plodding ability, thoroughly trained and methodically directed, that Germany at present has so commanding an advantage. It is the failure of our schools to turn out, and of our manufacturers to demand, men of this kind, which explains our loss of some valuable industries, and our precarious hold upon others. . . . There are plenty of chemists turned out, even by our universities, who would be of no use to Bayer & Co. They are chock-full of formulæ, they can recite theories, and they know text-books by heart; but put them to solve a new problem, freshly arisen in the laboratory, and you will find that their learning is all dead. It has not become a vital part of their mental equipment, and they are floored by the first emergence of the unexpected.

The President then proceeded to treat of the history of cold. He said the whole question of

#### ZERO OF TEMPERATURE

took an entirely new form when Lord Kelvin, in 1848, after the mechanical equivalent of heat had been determined by Joule, drew attention to the great principles underlying Carnot's work on the "Motive-power of Heat," and applied



them to an absolute method of temperature-measurement, which is completely independent of the properties of any particular substance. The principle was that for a difference of one degree on this scale, between the temperatures of the source and refrigerator, a perfect engine should give the same amount of work in every part of the scale. Taking the same fixed points as for the Centigrade scale, and making 100 of the new degrees cover that range, it was found that the degrees not only within that range, but as far beyond as experimental data supplied the means of comparison, differed by only minute quantities from those of Regnault's air-thermometer. The zero of the new scale had to be determined by the consideration that when the refrigerator was at the zero of temperature the perfect engine should give an amount of work equal to the full mechanical equivalent of the heat taken up. This led to a zero of 273 degrees below the temperature of freezing water, substantially the same as that deduced from a study of the gaseous state. It was a great advance to demonstrate by the application of the laws of thermodynamics not only that the zero of temperature is a reality, but that it must be located at 273 degrees below the freezing-point of water. As no one has attempted to impugn the solid foundation of theory and experiment on which Lord Kelvin based his thermodynamic scale, the existence of a definite zero of temperature must be acknowledged as a fundamental scientific fact.

#### VAN DER WAALS' EQUATION.

The most suggestive advance in the improvement of the Van der Waals equation of continuity of state has been made by a lady, Mme. Christine Meyer. The idea at the base of this new development may be understood from the following general statement: Van der Waals brings the Van der Waals surfaces for all substances into coincidence at the point where volume, pressure, and temperature are nothing, and then stretches or compresses all the surfaces parallel to the three axes of volume, pressure, and temperature, until their critical points coincide. But on this plan the surfaces do not quite coincide, because the points where the three variables are respectively nothing are not corresponding points. Mme. Meyer's plan is to bring all the critical points first into coincidence, and then to compress or extend all the representative surfaces parallel to the three axes of volume, pressure, and temperature, until the surfaces coincide. In this way, taking twenty-nine different substances, she completely verifies from experiment Van der Waals' law of correspondence. The theory of Van der Waals has been one of the greatest importance in directing experimental investigation, and in attacking the difficult problems of the liquefaction of the most permanent gases. One of its greatest triumphs has been the proof that the critical constants and the boiling-point of hydrogen theoretically deduced by Wroblewski from a study of the isothermals of the gas taken far above the temperature of liquefaction are remarkably near the experimental values.

#### HYDROGEN NOT A METAL.

After the beautiful discovery of Graham that palladium can absorb some hundreds of times its own volume of hydrogen, and still retain its lustre and general metallic character, the impression that hydrogen was probably a member of the metallic group became very general. The only chemist who adopted another view was the President's predecessor, Professor Odling. In his "Manual of Chemistry," published in 1861, he pointed out that hydrogœn has chlorous as well as basic relations, and that they are as decided, important, and frequent as its other relations. From such considerations he arrived at the conclusion that hydrogen is essentially a neutral or intermediate body, and therefore we should not expect to find liquid or solid hydrogen possess the appearance of a metal. This extraordinary prevision, so characteristic of Odling, was proved to be correct some thirty-seven years after it was made. . . . Liquid hydrogen is a colourless transparent body of extraordinary intrinsic interest. It has a clearly defined surface, is easily seen, drops well, in spite of the fact that its surface tension is only the thirty-fifth part of that of water, or about one-fifth that of liquid air, and can be poured easily from vessel to vessel. The liquid does not conduct electricity, and, if anything, is slightly diamagnetic.

#### THE STRONG CONDENSING POWERS OF LIQUID HYDROGEN

afford a simple means of producing vacua of very high tenacity. When one end of a sealed tube containing ordinary air is placed for a short time in the liquid, the contained air accumulates as a solid at the bottom, while the higher part is almost entirely deprived of particles of gas. So perfect is the vacuum thus formed that the electric discharge can be made to pass only with the greatest difficulty. Another important application of liquid air, liquid hydrogen, &c., is as analytic agents. Thus, if a gaseous mixture be cooled by means of liquid oxygen, only those constituents will be left in the gaseous state which are less condensable than oxygen. Similarly, if this gaseous residue be in its turn cooled in liquid hydrogen a still further separation will be effected, everything that is less volatile than hydrogen being condensed to a liquid or solid. By the use of a new liquid gas exceeding hydrogen in volatility to the same extent as hydrogen does nitrogen, the investigator might get to within five degrees of the zero; but even a second hypothetical substance, again exceeding the first one in volatility to an equal extent, would not suffice to bring him quite to the point of his ambition. That the zero will ever be reached by man is extremely improbable.

#### THE NEXT STEP TOWARDS THE ABSOLUTE ZERO

is to find another gas more volatile than hydrogen, and that we possess in the gas occurring in clefts, identified by Ramsay as helium, a gas which is widely distributed, like hydrogen, in the sun, stars, and nebulae. It is a much more volatile substance than hydrogen in either the liquid or solid condition. The inference to be drawn from its adiabatic expansion is that helium must have touched a temperature of from 9° to 10° for a short time without showing any signs of liquefaction, and consequently that the critical point must be still lower. This would force us to anticipate that the boiling-point of the liquid will be about 5° absolute, or liquid helium will be four times more volatile than liquid hydrogen, just as liquid hydrogen is four times more volatile than liquid air. . . . If the present Royal Institution attack on helium should fail, then we must ultimately succeed by adopting a process based on the mechanical production of cold through the performance of external work. When a turbine can be worked by compressed helium the whole of the mechanism and circuits being kept surrounded with liquid hydrogen, then we need hardly doubt that the liquefaction will be effected. In all probability gases other than helium will be discovered of greater volatility than hydrogen. Gases may exist having smaller atomic weights and densities than hydrogen, yet all such gases must, according to our present views of the gaseous state, be capable of liquefaction before the zero of temperature is reached. The chemists of the future will find ample scope for investigation within the apparently limited range of temperature which separates solid hydrogen from the zero.

#### THE UPPER AIR.

The present liquid ocean, neglecting everything for the moment but the water, was at a previous period of the earth's history part of the atmosphere, and its condensation has been brought about by gradual cooling of the earth's surface. . . . The permanence of the composition of the air at the highest altitudes, as deduced from the basis of the dynamical theory of gases, has been discussed by Stoney, Bryan, and others. It would appear that there is a consensus of opinion that the rate at which gases like hydrogen and helium could escape from the earth's atmosphere would be excessively slow. Considering that to compensate any such loss the same gases are being supplied by actions taking place in the crust of the earth, we may safely regard them as necessarily permanent constituents of the upper air. . . . The whole mass of the air above forty miles is not more than one seven-hundredth part of the total mass of the atmosphere. It must be observed, however, that a sample of air taken at an elevation of nine miles has shown no difference in composition from that at the ground, whereas, according to hypothesis, the oxygen ought to have been diminished to 17 per cent., and the carbonic acid should also have become much less. This can only be explained by assuming that a large intermixture of different layers of the atmosphere is still taking place at this elevation.



## THE SPECTRA OF AURORAS.

M. Henri Stassano enumerates upwards of one hundred auroral rays, of which the wave-length is more or less approximately known, some of them far in the ultra-violet. Of this large number of rays he is able to identify, within the probable limits of errors of observation, about two-thirds as rays, which Professors Liveing and Dewar have observed to be emitted by the most volatile gases of atmospheric air unliquefiable at the temperature of liquid hydrogen. Most of the remainder he ascribes to argon, and some he might, with more probability, have identified with krypton or xenon rays, if he had been aware of the publication of wave-lengths of the spectra of those gases, and the identification of one of the highest rays of krypton with that most characteristic of auroras. The rosy tint often seen in auroras, particularly in the streamers, appears to be due mainly to neon, of which the spectrum is remarkably rich in red and orange rays. One or two neon rays are amongst those most frequently observed, while the red ray of hydrogen and one red ray of krypton have been noticed only once.

## A-RESEARCH BY PROFESSOR MACFADYEN,

just concluded, has shown that many varieties of micro-organisms can be exposed to the temperature of liquid air for a period of six months without any appreciable loss of vitality, although at such a temperature the ordinary chemical processes of the cell must cease. At such a temperature the cells cannot be said to be either alive or dead, in the ordinary acceptation of these words. It is a new and hitherto unobtained condition of living matter—a third state. Certain species of bacteria during the course of their vital processes are capable of emitting light. If, however, the cells be broken up at the temperature of liquid air, and the crushed contents brought to the ordinary temperature, the luminosity function is found to have disappeared. This points to the luminosity not being due to the action of a ferment—a “Luciferase”—but as being essentially bound up with the vital processes of the cells, and dependent for its production on the intact organisation of the cell.

## Birth.

OAKLEY.—On September 3, at 29 Little Newport Street, W.C., the wife of Frank A. Oakley, chemist, of a son.

## Marriages.

CARR—WALLACE.—At Holy Trinity Church, Berwick-on-Tweed, on September 2, Walter Aitchison Carr, son of Mr. Walter Carr, chemist, Berwick, to Ethel, second daughter of Mr. James Wallace, Berwick.

CASSON—KING.—On September 11, at St. Cuthbert's, Southport, by the Rev. C. H. Hatfield, Frank Casson, chemist and druggist, of Trowbridge, Wilts, to Caroline Ada, third daughter of Mr. F. C. King, of Southport and Banff.

GOLDFINCH—SPINNER.—On September 9, at St. James's Church, Staple, Kent, by the Rev. J. C. W. Valpey, Albert Edward Goldfinch, second son of George Goldfinch, Ph.C., F.C.S., of Hendon, N.W., to Lucy Agnes, daughter of Robert Spinner, of Staple, Kent.

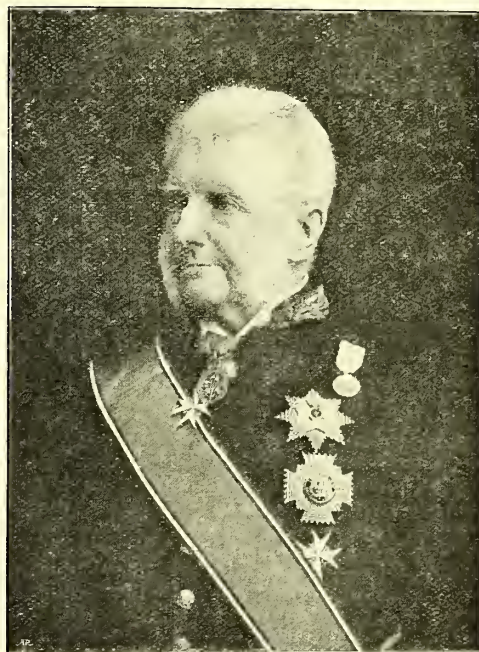
MACKIE—PATERSON.—At the Central Hotel, Aberdeen, on September 3, by the Rev. Alex. Wishart, U.F. Church, Forgue, Alexander Mackie, chemist and druggist, Culter, to Isabella, youngest daughter of the late George Paterson, Chapel Park, Forgue, Huntly.

MAYSON—JEFFERIES.—On September 9, at Holy Trinity Church, Blackpool, by the Rev. W. Woodall, W. Leslie Mayson, chemist and druggist, Blackpool, to Margaret Ellen Leah, eldest daughter of Mr. Arthur Jefferies, of Blackpool.

PATTINSON—BOUCH.—At St. Kentigern's Church, Aspatria, on September 4, by the Rev. William Jardine, assisted by the Rev. A. P. Dawe and the Rev. E. Compton Gill, Joseph Pattinson, pharmaceutical chemist, Aspatria, to Mary, second daughter of the late Mr. Kendal Bouch, Aspatria.

## Deaths.

ABEL.—At 2 Whitehall Court, S.W., on September 6, Sir Frederick Augustus Abel, Bart., Hon. Secretary and Director of the Imperial Institute. Aged 75. “The chemist of defence,” as Professor Dewar once called Sir Frederick Abel, was the son of Mr. J. L. Abel, of Woolwich, and we have been told that as a lad he got his first introduction to chemistry in a druggist's shop in the Borough; but it was pure chemistry that he aimed at, and accordingly he became a pupil at the Royal Polytechnic Institution when he was 17. There he stayed about a year, when Professor Hofmann came to London at the solicitation of Prince Albert to start the Royal College of Chemistry in 1845, and Abel became one of the first twenty-six students. He made good progress, and when Schönbein in that year discovered guncotton, Hofmann asked Abel to make some of it. The sample was shown to the Chemical Society a few years ago as the first made in this country. Abel's progress in the laboratory was rapid. He was made an assistant demonstrator in 1846, and quickly



[Photo. by Elliott &amp; Fry.]

SIR F. A. ABEL, BART., F.R.S., F.C.S., &amp;c.

reached a position second to Dr. D. [S.] Price, his junior being Mr. E. C. Nicholson. Amongst the first published researches from the college was one by Abel on “Some of the Products of the Oxidation of Cumol by Nitric Acid,” and his bent was towards the study of nitrogen derivatives or explosives. In 1851 he succeeded Faraday as professor of chemistry at the Royal Military Academy, Woolwich, and three years later became the “chemist of defence” in his appointment as chemist to the War Office, which position he retained until 1888, when he was appointed President of the Special Committee on Explosives. His first great service in these capacities was his elaborate investigation of guncotton, which by Schönbein's process was the most treacherous of substances. We must be content in this connection to quote Guttman's pithy comment: “The real initiative to the successful modern manufacture of guncotton was given by Sir Frederick Abel, who insisted on the necessity of a thorough division of the guncotton, in order to free it completely from every trace of acidity. His process is still the one in use, although many modifications have been made in the apparatus and operations of manufacture.” This was done in the early sixties, and much work followed in regard to the chemistry and physics of explosives, Sir Andrew Noble assisting him in the



latter. His most important service to the War Office was, however, the invention, in conjunction with Professor Dewar, of the smokeless powder, called cordite, patented by them in 1889. This consists of nitro-glycerin 58, guncotton 37, and vaseline 5, mixed with the aid of acetone, 19.2, the paste being formed into thin cords, whence the name. Abel's name will also be indelibly associated with experiments and legislation on the flash-point of petroleum. In 1885 he rendered valuable service as a member of the Council of the Inventions Exhibition, and on the formation of the Imperial Institute, two years later, he was appointed organising secretary and general director. The duties of this office he continued to perform, in later years receiving no pecuniary reward for his services, until his death. To him especially are due the arrangements for scientific research in the Institute, which he supervised until 1896, when he secured the appointment of Professor Dunstan as director of the Technical Department. Sir Frederick had been a Fellow of the Chemical Society since 1848. He was elected a councillor before he was 30, and acted as Vice-President, Foreign Secretary, Treasurer, and President, the last in 1875-77. In 1876 the research fund of the Society, started by Mr. T. Hyde Hills with 10*l.*, got an impetus by Dr. G. D. Longstaff's gift of 1,000*l.*, which was equalled by other subscriptions—due mainly to Sir Frederick's assiduous canvassing. He was elected a Fellow of the Royal Society in 1860, and was one of the founders of the Institute of Chemistry. He was President of the Society of Chemical Industry in 1882-83, of the British Association in 1890, and of the Iron and Steel Institute in 1891. He was elected an honorary member of the Pharmaceutical Society in 1894. He was D.Sc. Cantab., D.C.L. Oxon., and had many other academic honours. Queen Victoria knighted him in 1883, gave him the K.C.B. in 1891, made him a baronet in 1893, and he received the G.C.V.O. last year. Sir Frederick's death occurred suddenly on Saturday night. He was a widower, and has left no heir to the baronetcy. The funeral took place at Nunhead on Thursday, and was preceded by a service in St. Martin's-in-the-Fields at 11.45 A.M., when many old friends of Sir Frederick attended, amongst them Mr. T. Tyrer, who represented the Society of Chemical Industry.

**DALRYMPLE.**—On August 31, at Liverpool, Mr Hugh Dalrymple, for thirty-three years in the employ of Messrs. Evans, Sons & Co., Hanover Street, Liverpool. Aged 53½.

**ELLIS.**—At Haringay, London, N., on September 3 (as reported in last week's issue, page 466), Mr. J. William Frederick Ellis, chemist and druggist. Aged 30.

**EVANS.**—At Aberporth, Cardiganshire, on September 3, Mr. David Evans, chemist and druggist, late of Maindee, Newport.

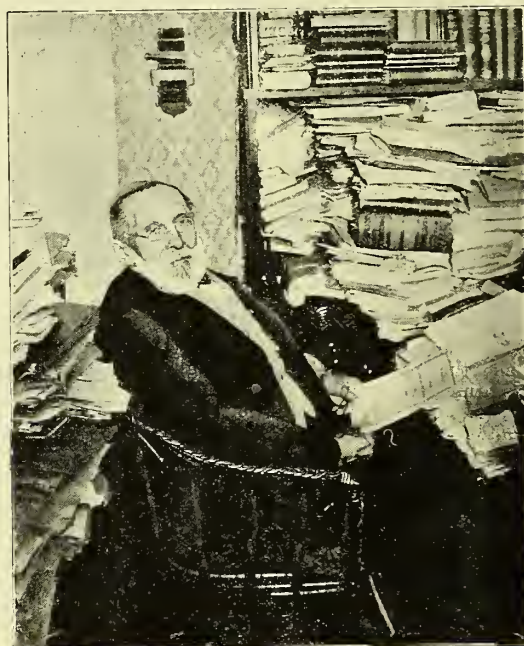
**LETBE.**—At Bishopwearmouth, Sunderland, on August 29, Mr. John Letbe, chemist and druggist. Aged 71.

**LOW.**—On August 26, Mr. Joseph Low, chemist and druggist, Whitechapel. Aged 58.

**PETTIFER.**—At Mayfield, Crudwell, Malmesbury, Wilts, Mr. Stephen Pettifer, only surviving son of the late Thomas Pettifer, of Eydon, Northamptonshire. Aged 59 years. Mr. Pettifer was principal of the firm of Stephen Pettifer & Sons. For many years he practised as a veterinary surgeon, and some years since was succeeded by his eldest son, Mr. T. Valentine Pettifer, F.R.C.V.S. It was, however, as a specialist in sheep-diseases that he was best known, and his Santovin for sheep is familiar to many of our readers.

**VIRCHOW.**—At Berlin on September 5, Professor Rudolf Virchow. Aged 80. In Virchow medical science loses her most eminent pathologist and Germany one of her most enlightened public men. Virchow was born at Schifflern, Pomerania, on October 31, 1821, and graduated in medicine at Berlin in 1843. He was immediately appointed prosector of anatomy at the Charité Hospital there, and in 1847 became an extra-mural lecturer in pathology of the Berlin University. This was the subject of his lifetime, especially in its relation to infectious diseases, and not many years elapsed before his work became known to the medical profession in all countries. Sent in 1848 to investigate an outbreak of typhus fever in Silesia, he was shocked to find the degraded manner in which the people herded together.

His report revealed more than the pathologist: it bore the first indications of his zeal as a social reformer. He was elected to the Prussian Assembly before he reached the age at which he might legally sit, but this ineffectual effort did not minimise his reforming proclivities, and in 1862 he was elected to the Chamber by three constituencies. He took his seat for one of the electoral colleges of Berlin. He became the leader of the Radical party, an opponent of Bismarck and of the Reactionary school. When war broke out in 1866, Virchow found another sphere for his activity. In the campaigns of that year and of 1870-71, he assisted in the organisation of the ambulance-work. He continued to lead the *Freisinnige* party until 1878, when he resigned the leadership to Eugen Richter, and retired from active political life, on the ground that he could no longer be useful. In 1880 he became a member of the Reichstag. As Chairman



PROFESSOR VIRCHOW IN HIS BERLIN LIBRARY.

of the Committee on Finance of the Prussian Diet for twenty-five years, he helped to establish the present Budget system of Prussia. As a public man, however, his greatest work was done on the Berlin Municipal Council, to which he belonged for forty-two years. His constant advocacy of sanitary reform has removed from Berlin the reproach of unhealthiness, and its present systems of sewage-disposal and water-supply are due in no small measure to his scientific researches and political activity. Professionally, Virchow's fame commenced with his publication of "Cellular Pathology" in 1856, when he occupied the chair of pathology at Würzburg. In this he showed for the first time that the cell is the unit of life in morbid as well as in healthy conditions, and that every cell originates directly from a pre-existing cell. Even the most abnormal structures are derived from normal cells driven to abnormal development by injurious agencies. This threw new light upon the origin of disease, previously regarded as a kind of importation of foreign matter into the body. This book gave medicine a scientific basis, and Virchow at one bound became the foremost pathologist of his day. Berlin University offered him the chair of pathology, and there he continued his labours. He was well known in this country. In 1893 he visited London to deliver the Croonian Lecture before the Royal Society, and in 1898 he delivered the Huxley Memorial Lecture at Charing Cross Hospital in historic surroundings, Lister and Paget paying tributes to his greatness. In January of this year Virchow broke his thigh while stepping from a tramcar, and never completely recovered from the shock.



## Collected Confectionery.

THE products of the confectioner have an irresistible attraction for the majority of people, even when they have passed their first youth. Therefore the annual exhibition and market of the Confectioners, Bakers, and Allied Traders is usually a success, and the tenth of the series, which is being held in the Agricultural Hall this week, is likely to outvie its predecessors in popularity. The exhibits are well-arranged and picturesque, and although they do not appear to be quite so numerous as usual, they have lost none of their attractiveness. The most aggressively lavish displays are made by CALEY, of Norwich (whose sumptuous tent of green and white and gold is lined and decorated and emblazoned with confections of all kinds), W. VERNON & SONS, of Liverpool (who have a winged Mercury whirling on top of their gilt-domed pavilion), BURTON, SON & SAUNDERS (LIMITED), of Ipswich (who amongst other things have a working model of the Laxey wheel, Isle of Man, done in icing-sugar, the "water" dropping in the form of fine sugar from a glass jar suspended above the wheel), and the LONDON ESSENCE COMPANY. Particular interest attaches to the display by the well-known Camberwell company from the fact that four civet cats are on view. These animals are the objects of much curiosity and excitement. We give an illustration of one of the tamest of the quartette in the



arms of Mr. J. F. Child, the manager of the company. In the interior of the Exhibition pavilion a new line of floral ottos is to be seen, "Royal Red Rose" being the latest production. There are thirty or forty varieties in this series, and they are being pushed as specially adapted for the manufacture of lozenges and cachous. Soluble fruit-essences, essential oils, and colourings in great variety are to be noted at this stand, similar exhibits on a less pronounced scale being made by the MANCHESTER CHEMICAL COMPANY, HASSALL & CO., and GRIMWADE, RIDLEY & CO. The Manchester company have a cream-of-tartar substitute called "Kreemola," while an article for a similar purpose made by the Stratford firm is named "Lasite." Messrs. Grimwade, Ridley & Co. have a very fine display of castor and icing sugars, lozenges, culinary essences, and general

confectionery. Packed goods (baking-powders, egg-powders, custard-powders, &c.) are likewise a speciality of the Ipswich firm.

Machinery plays a large part in this, as in most trade-exhibitions. One of the best displays is by W. GARDNER & SONS. The "Rapid" sifters and mixers are now established trade-machines, but improvements are being constantly made in them, and the mixer, which has a sprayer attached (for impregnating with essential oils, &c., at the time of mixing), has been further improved. The glass receptacle for the essence is now graduated, and a double, treble, or quadruple spray may be attached as required. In this manner a quart of essence may be sprayed on to 150 lbs. (or more) of powder in five minutes. WERNER, PFLEIDERER & PERKINS (LIMITED) take up a considerable portion of the wall-space on the south side of the Hall with a variety of machinery. The NATIONAL CASH-REGISTER COMPANY (LIMITED) announce that—

- It is easy to see through anything connected with your business if you use a National cash-register.

To point the moral they have an x-ray apparatus fitted up showing views of the works at Dayton, Ohio, seen *through* one of their cash-registers. The newest type of registers has separate cash-drawers for as many as six assistants. In the gallery THOMAS O'BRIEN is showing his self-closing check-tills now so well known to chemists, and the patent invalid-tables described and illustrated in our issue of September 14, 1901 (page 462). J. DEFRIES & SONS (LIMITED) are showing the Pasteur (Chamberland) filters and Equifex (disinfecting-appliances); FARROW & JACKSON (LIMITED) have a nice exhibit of English-made soda-fountains; an automatic sugar-scale (capable of ten weighings per minute) is shown by W. & T. AVERY (LIMITED), and the "Gle" sifters and mixers are exhibited by GARNISH, LEMON & ELLACOTT. In the gallery a simple bottle-washing machine called the "Syren" is on view, the exhibitor being E. JANS-SON. The "Syren" may be attached by means of a thumb-screw to the side of a tub, and the brushes (of steel wire) are made to suit medicine-bottles of all sizes. A machine for blending and mixing spices, drugs, foods, &c., is shown in the gallery by W. R. DELL & SON. It is simple, compact, has a central delivery, and small sizes are made which can be driven by hand.

Butter-substitutes are numerous. "Albenc" is exhibited by BROOMFIELD & CO. The qualities of a vegetable butter are being demonstrated by a lady "chef" at the stand of J. CROSFIELD & SONS (LIMITED), while the COCOS-BUTTER MANUFACTURING COMPANY are showing cocos-butter and edible oils. Condensed eggs are subjected to curious inspection at the stall of the CONDENSED-EGG SYNDICATE (LIMITED), and CROSFIELD'S (LIMITED) have a handsome show of cane sugars and syrups. COSENZA & CO. show Maggi's *consommé*, soups, and essence, and GORDON & DILWORTH'S tomato-catsup is very much in evidence. Malt extracts are shown by EDME (LIMITED) in a handsome heliotrope pavilion, by the BRITISH MALT PRODUCTS COMPANY, and by C. DE KIMPE & CO. Trucks, barrows, handcarts, vans, and other vehicles are shown by H. C. SLINGSBY, BLOOMFIELD & SON, the BRISTOL WAGON AND CARRIAGE WORKS COMPANY (LIMITED), W. LLOYD MCCARTHY, and ROTHSCHILD & BAKER. The well-known display of animal foods and medicines prepared by SPRATT'S PATENT (LIMITED) is still a source of attraction, and ROSBACH (LIMITED) is showing a new variety of advertising showcards that are well worthy of attention. An art picture (5 feet by 3 feet), framed in oak, would be an attraction in any pharmacy. These framed pictures are supplied free to best customers. VOILE & WORTLEY are showing licorice confectionery in all shapes and forms—amongst them a line of tiny "chest-relievers" that chemists could sell. The LAMSON-PARACON SUPPLY COMPANY (LIMITED) are showing their duplicating counter-books and other stationery, and YOUNG'S PATENT HYGIENIC BIN COMPANY have on show, besides their bins, a new form of welded galvanised-steel cisterns, which they claim are more durable than the ordinary riveted variety.

An exhibit near the main entrance belongs to the AMERICAN COCKROACH AND BLACKBEEFLE SOLVENT COMPANY. This insect-solvent is a pinkish powder "that dissolves cockroaches, beetles, ants, &c., instantaneously." The gentleman in charge, in shirt-sleeves and an American



accent, alleges that this infallible destroyer is a "non-poisonous natural mineral," which has to be ground and sifted through silk before it is perfected. It is put up in 1-oz., 2-oz., 4-oz., 8-oz., 1-lb., and 5-lb. tins. Cockroaches and other undesirable insects eat it with avidity. "Yes, sir. They come out, eat it up, and then go in and tell all their friends about it. The whole colony comes to have a taste, and in a little while they all go home and die peacefully." The stall is decorated with cases of entomological specimens, comprising almost everything in the insect line, from tiny English ants to a giant tarantula, "a bigger and better specimen than that in the British Museum, sir."

## Trade Notes.

THE ANNUAL RECORD of the Metropolitan College of Pharmacy for the past year, or ninth session, has just come to hand. The prefatory pages contain interesting items respecting past and present Metro-men and the College; it is followed by a report of the eighth annual dinner, examination-papers, lists of prizemen and of past students now in business, and various other interesting items. The report is embellished with portraits of Messrs. W. Watson-Will (the Principal), A. C. Wootton (Chairman at the last dinner), H. Lucas, F. Filmer de Morgan and D. J. Williams (demonstrators), and W. S. Carver (Secretary), also with a group-photo of the 1902 summer session students.

**KODAK DEVELOPMENT.**—On Monday last the new show-room and premises of Kodak (Limited) at 41 and 43 Clerkenwell Road, E.C., were opened. The old Kodak building had an area of 16,000 square feet, and the adjoining block of 23,000 square feet having now been annexed, a respectable total in square feet (for London stock and office purposes only) is obtained.

The new offices are sumptuously fitted and decorated by Walton. The show-room, board-room, and offices are in white with stencilled art designs on the plaster-walls, forming a frieze all round, and enlargements of royal bromide prints of Kodak photos are let in as panels in the lower portion of the walls. The illustration gives some idea of the decoration, but one must sit in the antelope-skin covered chairs in the board-room to become properly permeated with their

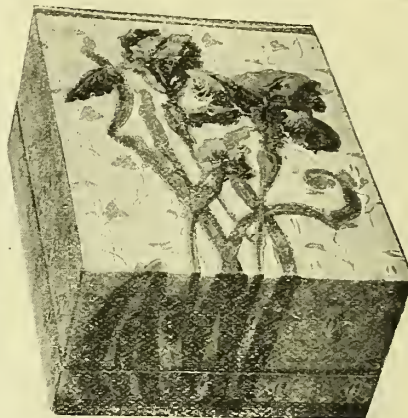
luxuriance. Each department is shut off from the other by fireproof doors lined with asbestos, and the feet sink everywhere in soft carpetings. A Kodak developing-machine has been introduced for doing away with the dark-room. It is a handsome nickelled-metal box into which the exposed spool is fixed. A few turns of the handle unwinds the black-paper covering of the film, the developer is poured in, and, the lid having been placed on, the handle is turned until the negatives are developed.

**CHRISTMAS GIFTS.**—The Vinolia Christmas perfume-caskets are already on the market. This is like catching Father Christmas before his beard has grown, but far-seeing chemists look around for Christmas novelties even in September. We illustrate one of the caskets with an iris design, which looks very pretty. Our picture shows a double casket, but single caskets may be obtained, and those who want variation in design may choose daffodil, rose, azalea, gladiolus, or lily besides. This series may be

profitably retailed at 2s. 6d. to 3s. 6d. per casket. Another

very sweet box is made of white satin, with violets on top, and is edged and lined with violet satin. A third is of red satin, with lace design in gold, while a fourth is covered with white leatherette and has white - satin linings; but the "Iridescent-cushion" variety, with gold-silk cord

edgings and white lining, will doubtless have many admirers. All these are to be had single or double bottled, and at prices to fit all purses. Those that are put up with two bottles only, in case, include a bell-shaped "Liril" Violettes-de-Parme casket, the Pompeian and Losarin Peau-d'Espagne caskets. The two first named may well be retailed at 2s., leaving a good margin of profit; while the last-named would be sold at about 3s. to 3s. 6d. retail. For those whose loyalty still hankers after Coronation novelties the Coronation casket, in white leatherette, panelled with purple, and ornamented with a gilt crown, will be as enticing as any. Altogether, a choice variety, and worthy of attention. The Vinolia Company (Limited) have many other novelties at Malden Crescent, N.W., but these are the latest.



## Personalities.

MESSRS. CLAUDE RAYNAUD & Co., perfume-manufacturers, 7-9 Hosier Lane, E.C., inform us that they have appointed Mr. E. Stephens as their town representative.

MR. O. E. GARDINER, of Port Elizabeth, South Africa, will be in London in the course of a few weeks. His co-director, Mr. P. T. Dixon, has been home for some time, and will probably remain here until Christmas.

MR. THEODORE K. SHIPKOFF, of Kazanlik, arrived in London last Saturday from New York, and has since resumed his journey to Bulgaria, where he will take part in the semi-jubilee celebrations at the Shipka Pass, commemorative of the Russo-Turkish War.

"I AM glad to congratulate Mr. George Lynch," writes "C. K. S." in the *Tatler*, "on his approaching marriage to Miss Carmela Lescher, daughter of Mr. F. Harwood Lescher, of Devonshire Place, London. Mr. Lynch is one of the most alert of our younger journalists; he is an Irishman from Cork. He has travelled all over the world, was shut up in Ladysmith during the siege, was captured by the Boers, and a few months later was carrying a camera on behalf of the *Sphere* through the Forbidden City at Pekin."

MR. WALTER FARNWORTH, pharmaceutical chemist, has accepted an invitation to the mayoralty of Blackburn for the coming municipal year. Mr. Farnworth is the son of the late Mr. William Farnworth, chemist and druggist, of King William Street, Blackburn. He served his apprenticeship to pharmacy with his father, succeeding to the business on his father's death. He retired from commercial life six years ago. He entered the Corporation in 1893, and last July was placed on the Commission of the Peace for the borough. He is vicar's warden at the parish church, and a governor of the grammar school.

THE FRENCH COMMISSIONER at La Plata writes home that at Paraguay there is a strong demand for peppermint cordials, kola preparations, quinine, cocaine, creosote preparations, &c. Up to the present these have been principally supplied by the French. The German *Chemiker Zeitung* now calls the attention of Germans to this market.



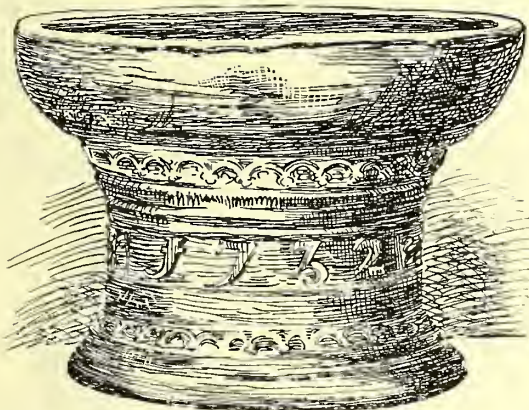
## Summer Holidays.

By Various Pharmacists.

IN CHESTER.

A PHARMACIST on pleasure bent and having a day to spare can find much of interest in the ancient city of Chester, which is well-known throughout the country for its "rows," restaurants, cathedral, and belt of massive walls. In finding the cathedral he is sure to be confronted by an old, magnificent Elizabethan house, exactly opposite to a large market-hall and other public buildings and in the occupation of Mr. C. Sangster, who is successor to Messrs. Shrubsole & Sons. In the windows of this establishment were displayed a great variety of photographic apparatus and a speciality in the shape of pure oatmeal-soap, "specially suitable for Chester water." The dispensing-establishment in the rear is elevated so that the dispenser has a complete survey of the retail department, and is himself a conspicuous object from the street. Not very far distant from this establishment are Messrs. Cheers & Hopley, successors to Grindley & Co., formerly Bowers & Co. They have a first-class pharmacy, which is also the home of a well-known cough-lozenge.

In the pharmacy of Mr. Andrew Donald, The Cross, there is one of the finest English-made bronze mortars that I have seen. It weighs 1 cwt., and stands 12 inches high, but measures 18 inches in diameter at the mouth. The sketch which I have made shows that the mortar is not without



artistic merit, the ornamentation being shown better in the rubbing. This also reveals the fact that the mortar was made by Luke Ashton, of Wigan, in 1732. It is, therefore, of more recent date than those described by Miss Florence



Peacock in THE CHEMIST AND DRUGGIST, January 27, 1900, and is apparently modelled on the Dutch style, as indicated by the sumptuous rim.

In the Chester rows (that is, tiers of establishments along which persons may walk and not suffer the least inconvenience from this country's dripping rains) are several good-class pharmacies. It would not be safe to conclude what the shop above dealt in by an inspection of the lower tier, for in one instance this happened to be a brush and fishing-tackle shop, but on ascending the steps and viewing the second tier I lighted on a shop redolent with perfumery—the speciality of Mr. Mills, pharmaceutical chemist—to wit, lavender-water ("of choyce and rayre qualitie—each crystal droppe delicious fragraunce spreads—made wythe moche care bye maister John Simon a chymist of No. 4 in ye Eastgate Row, in ye antiente citye of Chester"). Here, too, were seen gout rings of white metal, and also gold-like,

recalling mediæval methods for cure of disease. Amongst other names may be mentioned Messrs. Baxter, Tuke, and Roberts, all of whom have up-to-date pharmacies, and Boots (Limited) are there too. The hospital-authorities are also parallel with the times, for I saw while peregrinating the walls that the open-air consumption-treatment is provided in the hospital.

## Business Changes.

MR. E. R. GOUNDRY, chemist and druggist, is about to open a new pharmacy and photographic-store at 32 Cowbridge Road, Cardiff.

MESSRS. DAN DAVIES & Co., chemists, have purchased the business lately carried on by Mr. R. Williams at 324 Coldharbour Lane, Brixton, S.W.

MESSRS. EARLE (LIMITED), of Hull, have disposed of their branch-establishment at Hessle to their late manager, Mr. H. E. Brown, chemist and druggist.

MR. JOHN R. C. STEPHENS, chemist and druggist, Exmouth, has disposed of his Exeter Road branch to Mr. Nicholson, lately with Messrs. Ferris & Co., Bristol.

MR. HARRY BUCK, executor of the late Mr. Alfred Buck, chemist, announces that he will continue the business at 77 Bridge Street, Runcorn, under the style of Buck's Drug-stores.

THE business formerly belonging to Mr. J. T. Davy, chemist and druggist, at Irthlingborough, will in future be carried on under the style of the Irthlingborough Pure-drug Stores.

MR. S. V. BROOK, chemist and druggist, who has been many years in business at Grayshott Road, Lavender Hill, S.W., has opened a handsome pharmacy at 155 Lavender Hill, S.W.

MR. R. A. SYKES, chemist and druggist, late of Messrs. J. Woolley, Sons & Co. (Limited), of Manchester, has opened a new pharmacy at Cleveleys, near Blackpool, with fittings supplied by Messrs. Ayrton & Saunders, of Liverpool.

MR. HERBERT MASON, Wrottesley Street, Birmingham, has removed to new works at Cotteridge Road, King's Norton, and henceforth the business will be carried on under the name Herbert Mason & Co., instead of Reigate & Mason as formerly.

MR. TOM F. WILSON, for many years with Mr. J. F. Thursfield, chemist and druggist, of Market Place, Kettering, has opened new drug-stores in Dalkeith Place, Kettering. Mr. Thursfield's premises on the Market Hill are shortly to be taken down to allow of the street being widened.

## FASHIONABLE AILMENTS.

["It is well known that kingly complaints often lead subjects to simulate the illnesses of royalty, and we are certain to have an epidemic of 'appendicitis' later on." So writes a medical contributor, and he adds the following quatrains.]

How the feeling did excite us  
When we read about the King;  
Abscess or appendicitis,  
Quite the fashionable thing.

Nothing now but operations;  
Physic-treatment far too slow.  
Life too short, "We can't have patience;  
Chance it! Try it. Touch and go."

A. D.

HOW TO HAVE WHITE HAIR.—The *Philadelphia Record* is responsible for giving publicity to a simple process of turning the hair white. It is nothing more or less than to use a solution of ordinary laundry washing-blue. It must not be too strong, and should be liberally diluted with water. "Two or three applications of this will have an effect that will rather astonish you," says the *Record*. We should think it would.



## Scientific Progress.

**Apiose.**—Vongerichten (*Liebigs Annalen*, 1902, 321) states that apiin, the glucoside of parsley, decomposes on hydrolysis into apiose (a new sugar), glucose, and apigenin. Apiose is a pentose,  $C_5H_{10}O_5$ , and has the constitution of an oxymethylerythrose.

**Ichthyol is a Compound.**—H. Hirasawa, in a paper communicated to the Pharmaceutical Society of Japan (*Jour.*, 1902, page 663), states that he has separated ichthyol into two compounds by means of a solvent, and describes the properties of each, proving that ichthyol is a mixture of two substances, one of which remains dissolved in the aqueous solution of the other.

**A Sea-sickness Remedy.**—According to Dr. C. V. Wild (*Nouveaux Remèdes*, 1902, 334) tannate of orexine is a very powerful remedy in cases of sea-sickness. According to him a copious repast should be taken at the time of embarkation, and 0.5 gram of orexine tannate in 250 c.c. of water should be taken after two hours. For long voyages the dose may be repeated three times a day so long as necessary.

**Ylang-ylang Oil.**—Darzens has made a complete examination of a sample of ylang-ylang oil (*Apotheker Zeitung*, 1902, 575), and, whilst he confirms the presence of benzoic and acetic esters of the terpene alcohols, he does not consider that para-cresol methyl ether is present, as stated by Gal and Reyhler. He finds a small quantity of para-cresol on hydrolysis, but comes to the conclusion that it is present in the form of acetyl-para-cresol.

**Scopolamine.**—Schmidt, in the course of his researches on the mydriatic alkaloids, has made a careful examination of scopoline, the product of hydrolysis of scopolamine. As is well known, the last named yields scopoline and atropic acid, whilst atropine yields tropine and atropic acid on hydrolysis. By treatment with bromine, scopoline yields hydro-scopoline bromide,  $C_{17}H_{21}BrNO_3$ , melting at  $202^\circ C$ . Several crystalline derivatives of this compound were prepared, including the acetyl and benzoyl derivatives. The conclusion Schmidt comes to is that the formulæ proposed for scopoline are incorrect, but that it is clearly a tertiary base with a single hydroxyl group, the second oxygen atom being indifferent.

**Medicinal Plants of the French Soudan.**—A report by Dr. Le Clech and M. Vuillet has recently appeared on the medicinal and toxic plants of the French Soudan. Amongst the more interesting of the plants reported on are the following:—*Cassia occidentalis*: A decoction of the seeds of this is used by the natives with much success in cases of amenorrhœa, and also of nervous asthma. *Sarcocephalus esculentus*: The bark of this shrub is used in cases where quinine would be indicated. It appears to contain an alkaloid and two definite resins. *Corydala africana*: The bark is used as a tanning, especially for horses. The report also includes some useful information on strophanthus, kola, and the Soudan gums.

**Japanese Cantharides.**—Puran Sing (*Jour. Phar. Soc. of Japan*, June, 1902) publishes the results of his examination of samples of Japanese cantharides. It has been stated that the Japanese flies contain as much as 4 per cent. of cantharidin, but Sing denies this, and states that no sample he has examined ever contained more than 2 per cent. The process he used for the determination of cantharidin was as follows: Twenty-five grams of the powdered drug was treated with 10 c.c. of strong nitric acid diluted to 200 c.c. with water. A little gypsum was added, and the whole evaporated to dryness, and the residue extracted with chloroform. On evaporation of the solvent a mixture of crystals and a heavy yellow oil was left. The latter was washed out with the minimum quantity of ether, and the cantharidin dried and weighed. It melted at  $207^\circ$ – $210^\circ C$ .

**The Analysis of Aloes.**—Cæsar and Loretz (*Phar. Central*, 1902, 434) give the following figures for the watery extract, ash, and volatile matter of several varieties of aloes:—

	Aqueous Extract	Ash	Volatile
	Per cent.	Per cent.	Per cent.
Uganda aloes ...	43.48	0.72	8.74
True Cape aloes ...	66.80	0.9	9.30
Curaçao aloes...	72.44	2.4	7.74
Curaçao aloes (liver)...	71.26	1.6	9.32

**South African Quinine-tree.**—Mr. Juritz, in the course of his report as Cape Government Analyst, gives the results of an investigation of the bark of the so-called "quinine-tree," or "Unijela" of the Transkei (*Tabernaemontana ventricosa*,

Hochst), which grows in the Gxwaleni forest, in the Nyanduli district. The bark has a bitter taste, and is said to possess the therapeutic properties of quinine. Treating the bark by the usual alkaloidal separation methods, there were obtained from a chloroform-solution needle-shaped crystals, amounting to nearly 0.2 per cent. of the bark. These were found to be an alkaloid, having a melting-point of about  $200^\circ C$ . It had a bitter taste, an alkaline reaction, was not fluorescent in acid solution, and was very soluble in chloroform, alcohol, benzene, and in very dilute sulphuric and hydrochloric acids. A larger amount of the bark has been procured, and further investigation will be proceeded with, and physiological tests will likewise be made.

**East Indian Ipecacuanha.**—Paul and Cownley (*P. J.*, September 6, page 256) corroborate generally the analysis which we reported on August 9 (page 238) of the alkaloidal constituents of ipecacuanha cultivated in the Straits Settlements. They say that the Indian ipecacuanha resembles Bolivian rather than Columbian ipecacuanha, as is apparent from the following analyses:—

	Indian	Rio		Columbian	
	—	Root	Stem	Two kinds	
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Emetine ...	1.39	1.45	1.18	0.89	0.89
Cephaeline ...	0.50	0.52	0.59	1.25	0.95
Psychotrine ...	0.09	0.04	0.03	0.05	0.14
Total alkaloids...	1.98	2.01	1.80	2.20	1.98

The paper also deals with the separation of the alkaloids. Chloroform as a solvent is condemned, preference being given to ether.

## Things that Happen—Sometimes.



### Nocturnal Tinnabulation.

Son of Galen, fagged and weary,  
Seeks a little sweet repose:  
Soon the night-bell rattles cheery,  
Scarce his laden eyelids close.  
Snoring gently, dreaming sweetly,  
Subtle Morpheus holds his spell  
Till the clangour slays completely  
All his dreams. "Oh! hang that bell!"

Snug again—the dawn is breaking.  
Burgling William, seeking safe,  
Crashes carboy; with much quaking  
Listens lest alarm he gave.  
Then the bell-wires jerked with lumber  
Weary Galen's fears dispel.  
Turns he round, resumes his slumber,  
Murm'ring gently, "Hang that bell!"



## Observations and Reflections.

BY XRAYSER.

### The Educational Information

provided last week is necessary and useful. But if a parent with a moderately stupid boy looks at it, he may well shudder and reluctantly resolve to resist the temptations which pharmacy offers, and content himself with securing for his son a stool from which he may graduate as a merchant, a stockbroker, an actor, an author, or a statesman, or something in which a more or less honest living is to be made without first satisfying a lot of inquisitive people that he has a sound acquaintance with "phyllotaxis, including vernation," and five hundred other equally mysterious subjects. If the anxious parent would only reflect that hundreds of other boys not much less stupid than his own do somehow absorb all that mass of knowledge set forth on pages 435 and 436 of the last *C. & D.*, he will shut his eyes and take his chance; and it is because there are those who do this that a sufficient supply of candidates to replenish the Bloomsbury exchequer, and the necessary provision of chemists and druggists to meet Mr. Boot's requirements, are kept up.

### Mr. Maben's Account

of pharmaceutical education in America has very much interested me, though there are many things in it trying enough to the temper of a British patriot. It is not quite pleasant to be told so constantly, as is now the case, how "vastly superior" is everything over there to what we have at home. Mr. Maben falls into the general practice, and I am not able or inclined to contradict any of his assertions, though I may take the liberty of being astonished at some of them. The United States furnish the romance of modern history. The genii of Bagdad could not provide unlimited wealth more easily than the citizens of Chicago do. The governors of the College of Pharmacy of that city wanted to be nearer the middle of the city, so they bought new premises at a cost of half-a-million dollars! One hundred thousand pounds, that is! Where did they get this money from? Then somebody came along and offered them a clean profit of another half-million dollars on their purchase! And they refused it! When our little Pharmaceutical Society spent some ten thousand pounds on its new premises a few years ago many of its friends predicted its early bankruptcy. Why, the Chicago College could have contributed the ten thou' and scarcely felt it. But even Chicago does not seem to have aroused Mr. Maben's enthusiasm so much as Toronto. There he found

### An Ideal System

of pharmaceutical education: something "vastly superior to our own." That need hardly have been said. No one, native or foreigner, has ever found anything ideal about British pharmacy. School, "faculty," methods of teaching, and protection afterwards, are all an advance on our pharmacy. But it is the Ontario boys who most astonish me. They must be ideal too. They are set a synopsis of study to cover their four years of apprenticeship, and they are enjoined to read with eagerness—"read for facts to turn over in their minds and memorise while cleaning up the store and washing bottles." Never mind what happens to the bottles. And they are to avoid the omission of a day's reading as they would the loss of a dollar. There's a life for a healthy lad. It ought at least to ensure a big fortune in the future. Perhaps it does. The only Canadian chemist I can think of just now is, I suspect, a millionaire; but he exploited pink pills for pale people. But to return to these

apprentices. It does not follow, I am aware, that because a synopsis of study has been set for them they will follow it with conscientious constancy. But these Ontario youths must do so, or nearly, for Mr. Maben tells us that in May this year out of 127 candidates who presented themselves for the qualifying examination for the first time, 110 passed. That may mean, of course, that the candidates are proficient or that the examiners are easy. Mr. Maben himself credits the result to a well-defined curriculum.

### The Cost

of the whole pharmaceutical course in Ontario, including college and class fees, and examination-fees, amounts to rather less than 24*l.*, Mr. Maben says. But he ought to have added that every pharmacist in business is required to pay to the college an annual fee of *£*4. In the neighbouring province of Quebec, where the conditions are stiffer and the nominal monopoly greater than in any other part of the British dominions, an annual fee of *£*10 has to be paid. Whatever else Mr. Maben's article proves, it at least makes it clear that a reciprocity of certificates might be arranged without risk between the Dominion and the Mother Country.

### The Halfpenny-paper Raid

on chemists on behalf of the big advertisers of proprietary medicines is not being conducted quite ingenuously on either side. The "halfpennies," by their frequent use of such terms as "fraudulent" and "trickery," suggest that chemists make a practice of palming off a colourable imitation whenever an advertised medicine is asked for. On the other hand, I notice that a contemporary on the pharmaceutical side is indignant with the allegation that there are manufacturing firms who supply chemists with pills, syrups, emulsions, &c., ready packed and with retailer's name on the label, for the express purpose of being sold as substitutes for an advertised article. The pharmaceutical writer exhibits this as "a marvellous example of what can be done in the way of misrepresentation." But the statement is as true as it is innocent, and no chemist need be ashamed of the fact. First makers of cycles, sewing-machines, typewriters, lawn-mowers, never expected to keep the world to themselves, and they did much more inventive work than these medicine gentlemen can claim to have done. Why should we be the only traders who may not use our knowledge in fair competition?

### The German Apothekers

have no conscientious difficulty about this sort of competition. I notice that the suggestion of last year has been carried out, and that the Apotheker-Verein has now prepared a book of formulas, and has registered a special trade-mark which its members will be free to adopt. These formulas will no doubt deliberately imitate the most popular of the proprietary medicines of the day. In Germany the competition will be hardly fair to the quack man. The law forbids the sale of secret remedies, but he gets round this somehow, and advertises his panacea. But the authorities are against him and are always blocking his business. The Verein's product will not be a secret remedy, and will therefore not be interfered with.

### Twelve Ladies

were advertising for situations in last week's Supplement. Some of these, it is true, seek situations with doctors or in institutions, but others are evidently willing to come behind the retail counter. One describes herself as a good saleswoman, another would like to go abroad, and several offer themselves as *locums*. I have never noticed so many ladies' advertisements at one time. Formerly they came "as single spies, now in battalions." This looks like notice to quit to the male section. True, I do not find at present any advertisement for a lady-assistant, but it is not what we want but what they want which regulates the future.



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The "Sanitas" Co., Lim.,

are the exclusive Manufacturers of the  
well-known Non-poisonous

**"SANITAS" PREPARATIONS,**

and their other Manufactures include

"SOLDIS," "OKOL," "CREOCIDE," "FORMITAS," "OCHLOR,"  
"KINGZETT'S PATENT SULPHUR FUMIGATING CANDLES,"  
"SULPHUGATORS," "FORMIC SULPHUGATORS," "FORMIC  
AIR PURIFIERS," "FORMIC FUMIGATORS," KINGZETT'S  
PATENT DRAIN TESTERS, SHEEP DIPS, WEED KILLER,  
PATENT PRESERVED PEROXIDE OF HYDROGEN, INHALERS,  
DISINFECTORS, FUMIGATORS, BRONCHITIS KETTLES, and  
CARBOLIC FLUIDS, POWDERS, and SOAPS.

Full Catalogue and "How to Disinfect" Book will be sent free on  
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THE "SANITAS" CO., Ltd., Bethnal Green, LONDON, E.

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24 & 25 Fenchurch Street, LONDON, E.C.

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ORIGINAL MAKERS OF

**LICORICE, PINE TAR, AND  
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**Licorice Pellets,**

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WHOLESALE IMPORTERS  
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**FRENCH & GERMAN  
PROPRIETARY MEDICINES**

PRICE LIST ON APPLICATION.

LOWEST PRICES.

## MILNE'S BATTIST

A WATERPROOF TISSUE in place of  
OILED SILK, CUTTA PERCHA, OR JACONET.

GREASE- AND SPIRIT-PROOF.

NON-ADHESIVE AND PERMANENT

Can be boiled for two hours without injury.

**Withstands all Antiseptics.**

One-yard Boxes or Fifty-yard Rolls.  
36 and 46 inches wide.

**JOHN MILNE.**

The Galen Manfg. Co., Ltd., LONDON, S.E.



## JEWSBURY & BROWN'S MINERAL WATERS

YIELD A

**MAXIMUM OF PROFIT**

WITH A

[2]

**MINIMUM OF TROUBLE.**

By Appointment to King Edward VII.

**Ardwick Green, MANCHESTER.**

"Trifles make perfection, but perfection is no trifle."  
If you aim at perfection, use  
**Fletcher's Concentrated Liquors**

## Editorial Comments.

### Something Lacking.

THE tragic element is rarely long absent from great public events. Thus, almost on the eve of this week's meeting of the British Association at Belfast a colleague of this year's President (Professor James Dewar), and his predecessor in the chair twelve years ago, was suddenly struck down by the hand of death. Sir Frederick Abel was one of those men, somewhat



rare in science nowadays, who have started on their career of discovery without academic titles. "As in diplomacy and war, so in science, we owe our reputation and no small part of our prosperity to exceptional men." A perfectly true utterance of Professor Dewar's which fitly applies to Sir Frederick Abel—a man of all-round ability as a chemist, a sound administrator, and a courtier. Professor Dewar's address dealt with the progress of Belfast, the endowment of education, English and foreign applied chemistry, and the history of cold and the absolute zero—this last containing an excellent statement about the department of work with which Professor Dewar's name is indissolubly linked. We have culled some of the more telling passages from the address, and print them elsewhere in this issue, but the purpose of this note is to call attention to those remarks by Professor Dewar on the something lacking in British science and higher education. It commenced with the following particularly pregnant passage:—

Intelligent appreciation of scientific work and needs is not less but more necessary in the highest quarters to-day than it was forty-three years ago, when his Royal Highness the Prince Consort brought the matter before this Association in the following memorable passage in his presidential address: "We may be justified, however, in hoping that by the gradual diffusion of science and its increasing recognition as a principal part of our national education, the public in general, no less than the Legislature and the State, will more and more recognise the claims of science to their attention; so that it may no longer require the begging-box, but speak to the State like a favoured child to its parent, sure of his paternal solicitude for its welfare; that the State will recognise in science one of its elements of strength and prosperity, to protect which the clearest dictates of self-interest demand." Had this advice been seriously taken to heart and acted upon by the rulers of the nation at the time, what splendid results would have accrued to this country! We should not now be painfully groping in the dark after a system of national education. We should not be wasting money, and time more valuable than money, in building imitations of foreign educational superstructures before having put in solid foundations. We should not be hurriedly and distractedly casting about for a system of tactics after confrontation with the disciplined and co-ordinated forces of industry and science led and directed by the rulers of powerful States. Forty-three years ago we should have started fair had the Prince Consort's views prevailed. As it is, we have lost ground which it will tax even this nation's splendid reserves of individual initiative to recover.

It may be remembered that forty-three years ago chemical research had been well established in this country by Hofmann, and the first-fruits of it, as gathered by Abel, Merck, Nicholson, and Perkin, were in embryo. When that institution vanished—not into thin air, but to be re-incarnated on the banks of the Spree—there was little research organisation left to us, and it was about ten years later that Mr. T. H. Hills urged the Chemical Society to do something to encourage research, expressing his sympathy to the extent of 10%. This became the nucleus of a fund which has since done much good in helping young chemists to work, but we have lacked a school of researchers directly identified with the industries of the country, and it cannot yet be said that the oldest technical schools or any of the Universities are in the least interested in the work of manufacturers. Professor Dewar resurrected a Consular report of about a year ago in which British and German chemical industries were contrasted, much to the disadvantage of the former. There was nothing very original in this, but he came to the conclusion that the chemists turned out by our Universities are mere theorists, who are unable to solve a new problem, and are floored by the first emergence of the unexpected. They "would be of no use to Bayer & Co." This is the something we lack—"want of education." So Professor Dewar says. We would put it differently—viz., "want of connection between education and commerce." Critics of Professor Dewar's class do not give sufficient consideration to the peculiarities of this nation, which in govern-

ment is as different from Germany as water is from oil; and we happen to have a system of higher education which is centuries old, and has only recently been expanded in the technical direction. Alongside this are methods of manufacture which have made the country's business, and manufacturers may be forgiven their slowness to adopt the recommendations of academic gentlemen who produce men of "no use to Bayer & Co." After one has listened for a decade to theoretic papers on the constitution of camphor coming from the best-equipped laboratories in the land, it is hard to resist the thought that want of proper direction in effort rather than want of education also has a part in the something lacking. In short, we have taken science too seriously—too much for its own sake—and the lack of business ability or commercial effort amongst our researchers is one of the principal reasons for our falling behind in the race. It is an anomaly, for we are a nation of shopkeepers and as good business-men as anybody. Why should the quality be omitted when we enter Universities?

## British Business.

THE improvement which we noted in the Board of Trade returns for July was more than sustained in August, for the latter month contained two working days less than July. The imports for the month show a decline of 525,000%, or 1.3 per cent., and the exports an increase of 94,000%, or about 0.4 per cent. During the eight months of this year the imports have increased by 854,000% as compared with 1901, and 9,200,000% as compared with 1900. The exports, however, for a similar period declined 1,467,000% and 8,200,000% respectively. The detailed figures for August show that the imports of chemicals increased by 24,500%, oils by 9,800%, manufactured articles by 271,000%, raw materials for sundry industries by 189,000%, duty-free food and drink by 1,030,000%, and metals, raw materials for textile manufactures, and manufactured articles declined. Our imports of bleaching-powder continue to increase, and the following figures will give some idea of the inroads which German and French bleach is making in this country. The imports have been:—

	1901	1902
January-August ...	168,295 cwt.	184,449 cwt.

Coal-tar dyes (principally aniline) are responsible for the bulk of the increase under the heading of chemicals; on the other hand, soda-compounds, borax, brimstone, and saltpetre show declines. Of saccharin, 1,270,500 oz. less was imported, and 13,367 lbs. less of quicksilver. Unenumerated drugs increased by 5,809%, but cinchona dropped 2,946 cwt., and gum arabic 2,119 cwt. We imported 69,932 oz. of quinine and quinine-salts, valued at 2,457%, or about 8½d. per oz., and for the eight months the figures are 963,636 oz., valued at 48,653% or 1s. per oz. The returns from the export branch of chemicals are distinctly favourable, inasmuch as last month they increased by 89,000%, and for the eight months of this year there is an improvement of 453,000%. The totals are:—

	1900	1901	1902
	£	£	£
August ...	711,962	665,947	755,024
January-August ...	6,444,663	6,034,350	6,487,319

In bleaching-materials there is an increase of 25,000 cwt., due to larger shipments to the United States, but "other countries" show a falling-off to the extent of 83,000 cwt. All kinds of soda-compounds improved considerably, especially caustic soda and bicarbonate; soda-crystals, however, remain stationary; sulphate of copper has also met with a better demand, but the figures for the eight months are still very low compared with 1900-01. Of British quinine and its



salts we exported 83,545 oz. in August, valued at 5,099*l.*, or 1*s.* 2½*d.* per oz.; and for the eight months ending August 448,688 oz. (30,337*l.*) have been exported at the rate of 1*s.* 4½*d.* per oz. In addition there were exported 54,054 oz. foreign quinine and salts, having a value of 2,005*l.*, or 1*s.* 4*d.* (about double the import rate); and for the eight months ending August 148,086 oz. were shipped, valued at 6,602*l.*, or equivalent to 1*s.* 1½*d.* per oz. The superiority of British drugs and medicines is reflected in the continually expanding exports, and the figures so far this year are even higher than those for 1900, when there was an extra demand for South Africa. Taken all round the figures indicate that there is a steady trade going on, but as yet there are no symptoms of the revival which was expected to follow the conclusion of peace in South Africa. The Board of Trade has also published a statement of the trade and commerce of foreign countries and British possessions. The following summary shows the total imports and exports of the principal countries for the six months ended June (see *C. & D.*, July 12, page 50, for the four months ended April), and a comparison with the same period of 1901:—

	Imports. Six months ended June		Exports (Domestic) Six months ended June	
	1901	1902	1901	1902
	£	£	£	£
Germany ...	134,069,000	139,037,000	104,886,000	112,415,000
Belgium ...	41,996,000	45,853,000	34,548,000	36,530,000
France ...	88,864,000	90,073,000	80,588,000	83,328,000
Italy ...	35,119,000	36,902,000	26,627,000	27,581,000
Austria-Hungary	33,964,000	36,510,000	36,841,000	37,630,000
United States ...	90,300,000	94,986,000	150,386,000	133,023,000
Japan ...	13,226,000	13,444,000	11,592,000	11,146,000
British India ...	28,290,000	26,799,000	39,250,000	44,765,000
Canada ...	18,525,000	21,024,000	14,425,000	17,177,000
United Kingdom	262,417,000	262,740,000	138,580,000	135,376,000

It will be seen from the above table that the United Kingdom, United States, and Japan were the only countries whose exports shrank, while the German figures are remarkable for their expansion, showing that the country is recovering from the commercial depression which prevailed last year. The United States imports show an increase in all departments for the twelve months. The manufactures exported are 1½ million less than last year, and 6½ millions less than in 1900. This was chiefly due to the decrease in the value of iron and steel goods exported. Agricultural exports declined by 19½ millions, as compared with the previous year, this being due to the partial failure of the Indian corn-crop last year. It should be particularly noted that the United Kingdom exports, in addition to "domestic" products, foreign goods to the extent of 5½ million pounds' worth a month, which is as much as the United States does in that line during a year, and the proportion of manufactured goods exported by the United Kingdom is far greater than is the proportion in any other country. The following are the approximate figures for the more important countries:—

	Manu- factures	Natural Produce
United Kingdom	5	1
Germany...	5	2
France ...	2	1
Austria-Hungary	5	4
United States ...	2	5

The figures do not, of course, include re-exported natural produce. They show, in conjunction with the preceding table, which countries are our greatest competitors as manu-

facturers. Usually this element of proportion is neglected by patriotic persons, whose vision seems good only for big totals, irrespective of what goes to make them up.

## Analyses at the Cape.

MR. C. F. JURITZ, the senior analyst for the Cape of Good Hope, in his annual report, which has just been received, states that in 1901 he analysed only 559 fewer samples than in 1900, when the war disturbed things badly. Amongst the articles were sheep-dips (13), disinfectants (9), castor oil (8), sulphur-washes (8), liquor strychninæ hydrochlor. (4), "acid," powdered drugs, ginger-beer powders (2 each), and one sample each of ginger wine, stearine substitute, eau de quinine, suppository, strychnine, orange wine, and vermin-killer. The report gives details of the tariff-values of the services rendered to Government Departments and private individuals, the total values being approximately estimated at 1,645*l.* Food-analyses and agricultural analyses take up a considerable portion of the report. Sheep-dips are divided into tobacco, carbolic, lime-and-sulphur, and arsenical dips. The tobacco-dips analysed showed percentages of nicotine by weight ranging from 7.20 to 8.24. The Creolin-Pearson dip gave by fractional distillation 11.25 per cent. of water and light oils, 49 per cent. of medium oils, 22.25 per cent. of heavy oils containing 19 per cent. of carbolic acid and homologues, and 17.5 per cent. residue. Lloyd's lime-and-sulphur sheep-dip showed 17.9 per cent. of lime and 35.29 per cent. of sulphur. Dealing with the use of lime and sulphur as a horticultural insecticide, Mr. Juritz shows that the best stock solution is made by boiling 5 lbs. of freshly slaked lime with 10 lbs. of sulphur in 5 gals. of water, diluting one-fourth of this mixture to 7½ gals., adding 3½ lbs. of unslaked lime and 2 lbs. of coarse salt, and boiling for half an hour—a strange method. Four analyses of Battle's sheep-dip were made, as there were complaints about its excessive, and even toxic, action sometimes, but variation in chemical composition was found to be trifling, and carelessness in dipping is suggested as the cause of the mischief. Cooper's dip has regularly been analysed in the laboratory since its establishment, and the results show the arsenic-content (calculated as As<sub>2</sub>O<sub>3</sub>) to vary from 20.84 to 28.67; but the latter was from a sample which was not submitted in the original packet, and the dip generally shows an average of 22 per cent. As<sub>2</sub>O<sub>3</sub> and trifling variation in composition. It is suggested that in treating sheep internally (for wire-worm) with Cooper's dip, the "teaspoonful" directed to be given varies in volume according to the idiosyncrasies of the administrator, and poisoning may be produced by an overdose in this way; the general conclusion being that the fatalities from arsenical poisoning are more largely due to carelessness in dipping than to anything else. In the section devoted to "miscellaneous analyses," disinfectants are exhaustively treated. The bubonic plague scare brought many of these to the colony, and various samples were examined. "Glycoformal" was found to contain about 16 per cent. of formic aldehyde. Amongst other proposals, it was suggested that sheep-kraals and similar constructions should be disinfected with perchloride of mercury. Two kinds of tablets of corrosive sublimate were examined and found to contain about 46 per cent. HgCl<sub>2</sub>, the rest being common salt and water. As tablets of such a composition are readily soluble, Mr. Juritz suggests that a similar mixture might be made into 1-lb. cakes for employment on a large scale, using gum or some such substance to minimise the formation of the corrosive-sublimate dust which would be inhaled by the operator, and colouring the cake to prevent mistakes afterwards. A 1-lb. cake would be



sufficient to make 50 gals. of a 1-per-mille solution of the perchloride. During the plague-scare the local supply of corrosive sublimate, used lavishly for spraying plague-infected buildings, failed, and Mr. Juritz undertook the manufacture of it from metallic mercury, sufficient sublimate being made to provide 131,000 gals. of spraying-solution. Previous to this the mere dissolving of the already prepared material in water cost 250%, but Mr. Juritz's department manufactured the sublimate and made the solution at a cost of 64%, the net saving being about 1,000%. Other disinfectants examined during the year included the "Tahor" disinfectant (water and light oils, 20 per cent.; medium oils, 28 per cent.; heavy oils 18 per cent., containing carbolic-acid homologues 10 per cent.; residue, 33 per cent.); carbolic-lacene (free alkali and ether, of each 1 per cent., and 10.45 per cent. of phenols); and "Carbolo" disinfecting-fluid (water, 8 per cent.; light oils, 4 per cent.; medium oils, 37 per cent.; heavy oils 23 per cent., containing phenols absorbed by caustic soda 6 per cent.; residue, 28 per cent.), Calvert's liquid disinfectant was found to be of somewhat similar composition to "Carbolo," but the percentage of phenols was 11. Mr. Juritz also rendered service to his Government as well as to the people of the colony in the investigation of colonial produce, some of which will yield new facts to science. If his Department were better housed than it is, still more good might be obtained from it.

#### PRESIDENCY OF THE BRITISH ASSOCIATION.

Although it is seventy-one years since the British Association for the Advancement of Science first met (York, 1831), Professor James Dewar is only the sixth chemist who has filled the presidential chair. Professor A. W. Williamson, F.R.S., was the first chemist to occupy the position; this was at Bradford in 1873. The next was Sir Lyon Playfair in 1885, and he was followed two years later by Sir H. E. Roscoe. Then came Sir F. A. Abel in 1890, and Sir William Crookes in 1898. Astronomers and physicists appear to have been the favourites, but there have been nine reverend presidents, one member of the Royal house, and fourteen hereditary Peers who were men of learning, besides twenty-two baronets and knights, and several others who were honoured by their sovereign after their presidency.

#### THE PULPIT AND TRADE UNIONISM.

Canon H. Scott-Holland preached in St. Paul's Cathedral on August 31, taking for his text Ecclesiastes iv. 9 and 10: "Two are better than one, because they have a good reward for their labour. For if they fall, the one will lift up his fellow, but woe to him that is alone, when he falleth and hath not another to lift him up." In applying these words to the present day, the preacher said that labour could only secure its reward by combination. Unlimited individual effort was as wasteful as it was cruel. "Combine" was the watchword of modern industry in every department, and capital had at last woken up to the fact which trade unionism discovered long ago. Trade unionism endeavoured first to secure the reward of labour, and secondly to save the workman from being alone when he fell. It had not been without blunders and fallacies, but who had escaped like blunders and the discipline which followed? Capital had blundered many times, so had political economy and educated opinion, while trade unionism had the best record. They all had to look forward to the wider ideal of co-operation, by which the interest and responsibility of labour and capital might meet in the same persons. *A propos* of the Canon's sermon a passage in Sir John McDougall's speech to the Trades Congress may be mentioned, in which he suggested that "the time was coming when the Trades Congresses would say to a working-man employed by a public body that

he must put in his best work and a good quantity of it." When trade unionism insists not only that adequate wages should be demanded, but that the best work be given in return, we shall be within measurable distance of the millennium.

#### A FAVOURABLE CONTRAST.

So seldom do we have comparisons made between Germany and Great Britain which are advantageous to the latter that it is refreshing to note any which occur. This happens in a recent issue of the *Pharmaceutische Zeitung*, in the course of an editorial by our contemporary on a speech made by Herr Nasse to the Deutscher Apotheker-Verein. He advised the Society to leave business affairs to the pharmacists' representatives on the Apotheker-Kammer, or Pharmacy Board, and that the Verein should cultivate scientific subjects. The *Ph. Zeit.*, commenting on this, says:—

The pharmacist who turns his attention to research on certain drugs and preparations naturally seeks to turn his labours to account, chiefly in the manufacture of medicaments, which, however, if they take the form of improved medicaments, called "specialities," place him under the ban of the law. A long list of police regulations against the advertisement of medicaments and secret remedies surrounds the commercial side of pharmacy, and those which escape official censure are run to death by the medical Press. That English pharmacy (which is harried by no one) is before us in this domain was shown only recently by the numerous communications made to the British Pharmaceutical Conference.

Our contemporary proceeds to show that in Germany the pharmacist has no encouragement to take up such work, and he is beset in trade with so much competition and restriction that life is hardly worth living.

#### "PHARMACOPEDIA"

has done well, and a reprint is issued this week. The authors (Messrs. White and Humphrey) have taken the opportunity to prepare a sheet of additions and corrections, which is inserted amongst the prefatory pages. This contains some useful information and notes, especially in regard to Indian hemp, wherein an analogy is drawn between the secretions of the hop and hemp plants. The following will especially interest Indian pharmacists:—

Certain formulæ in the Government of India edition (1901) of the Indian and Colonial Addendum to the British Pharmacopœia differ slightly from those in the original edition (1900). Thus, prepared suet replaces lard in the formula for emplastrum mylabridis and in making the official preparations for which lard is directed to be used. Similarly, benzoated suet—prepared from prepared suet in the same manner as benzoated lard from prepared lard—replaces benzoated lard in the formulæ for unguentum mylabridis and unguentum myrobalani, as well as in making the official preparations for which benzoated lard is directed to be used. Finally, in making *sapo durus*, arachis oil or sesame oil may be employed in India instead of olive oil.

We understand that the new pages will be obtainable from the publisher (Mr. H. Kimpton) by anyone possessing a copy of the first issue of the book at the nominal price of 6d., post-free. Anyone who procures them and inserts them in his copy of "Pharmacopœia" will make it as complete as the new issue.

#### "ENGLISH INDIFFERENCE."

A New Zealand professor of chemistry has lately been falling foul of the English chemical-apparatus trade. Dr. W. G. Evans, who is about to take charge of the chemistry department of the Canterbury College there, applied for sanction from the Board to spend 300% in apparatus, which he wished to be purchased from a German firm. The Chairman of the Board, with true colonial patriotism, insisted on knowing why Dr. Evans could not purchase what he required from the Mother Country; and Dr. Evans replied with a lengthy report, the result of which was that the order was sent to Germany. Through the courtesy of the Agent-General for New Zealand we have received a copy of Dr. Evans's report. His principal reasons for preferring the German articles were (1) superior quality, (2) lower price,



(3) better packing, (4) more prompt supply. Another five reasons were more or less an indictment on English methods of doing business, and deal with the "serene indifference" and other peculiarities of the English dealers. Of course, says Dr. Evans, when English dealers list such apparatus as German glassware, Bohemian flasks, Berlin porcelain dishes, &c., and specially state that they are genuine, why should he not go to the fountain-head? Dr. Evans complains bitterly of English catalogues, which, he says, are ludicrously inadequate. Illustrations are "cribbed" from German sources, and 80 per cent. of the pages are devoted to articles suitable only for presents. The German houses carry large stocks, and can supply at once; English firms' goods are usually on paper only, and have to be obtained—generally from the Continent; and Dr. Evans complains of "tinkering" with these articles before despatch, so as to palm off German goods as English. Thus in one instance (out of several quoted) a seconds clock was ordered from a Cambridge firm. It arrived quite out of order and with twisted hands. On taking off the back-plate they found the legend "Made in N—," a town in Germany well known for cheap clocks. The front of the clock was branded "P—, makers, Cambridge." Another case: B., of London, could not say whether a slit to a spectroscope could be repaired till he knew, &c., although he was told that the spectroscope was his own make. The slit-draw was therefore sent to S. H., of Berlin, and returned perfectly fitted in four and a half months. Dr. Evans also complains that he cannot get accessories to standard instruments in England, whereas in Germany all such are made to fixed gauge, and can be supplied at any time. These and many similar accusations are brought against the trade in Dr. Evans's report, which we trust for the credit of trade in this country is at least somewhat over-drawn.

### IN SPITE OF ALL TEMPTATIONS.

DAGONET, in the last issue of the *Reveree*, has some pithy remarks about the way Englishmen are charged for things on the Continent. He says:—

In many of the Swiss hotels there are even two wine-lists—one priced for the English and the other for the Germans. The German list is 33 per cent. cheaper than the English. The tradespeople show the same favour as the hotel-keepers. Every shop-keeper has two prices, one for the English visitor and the other for the German visitor and the native.

I proved this myself. I went into a chemist's shop in a Swiss town, and, speaking English, bought a bottle of Eno's fruit salt. The chemist asked me *eight francs* for it—the English price on the label being 2s. 6d.

I did not pay it because the thing was an outrage. The next day I was passing the shop about noon—the hour of luncheon—and I noticed that the chemist was absent and the shop was in charge of a lad. So I walked in, and, speaking German, I asked for a bottle of Eno. When it was handed to me I said in German, "How much?" and the reply was, "Four francs."

Some years ago I had much the same experience in Lucerne. I had with me as my travelling companion Count Albert Edward, who speaks German to the manner born. I went into a shop and in English I asked for a bottle of perfume. It was given me and I was charged 4f. A day or two later, liking the scent, I asked the Count to get me another bottle. He went to the same shop, asked for the perfume in German, and was charged 2½f.

This system obtains throughout almost the whole of Switzerland. The English-speaking visitor pays from 33 to 50 per cent. more than the German for almost everything.

MESSRS. FORD, SHAPLAND & Co.'s ALMANACKS FOR 1903 are a very attractive series. The "Illustrated Almanack" is an octavo, nicely printed on tinted paper, and containing two monthly calendars on each page, with blank pages for advertisements facing these, if need be, otherwise attractive illustrations and reading-matter. Besides, there is a tale and useful household information. The pocket-almanacks, with round corners or crinkled edges, are enclosed in covers printed in colours (these are really pretty), and the contents, with writing-pages, are just what people want.

## Preparation of Milk for Babies.

By JAMES FORRESTER, M.B., C.M., Glasgow.

AS the artificial feeding of babies has become exceedingly common, and since the preparation of a good substitute for breast-milk is often beyond the intelligence of an ordinary mother, it is advisable that every chemist should know how to make one, and if he makes it known that he is prepared to do this, he will find that many of the medical practitioners in his neighbourhood will gladly avail themselves of his services. Everyone knows that the great bulk of infant-sickness is due to improper feeding. The first and often the only thing required in these cases is to prescribe a food suitable to the child's powers of digestion.

Cows' milk is used as a basis of practically all artificial foods. Its average composition and that of human milk are as follows:—

	Cows' milk	Human milk
Fat... ..	3.5	4.0
Sugar ... ..	4.3	7.0
Proteids ... ..	4.0	1.5
Salts ... ..	0.7	0.2
Water ... ..	87.5	87.3
	100.0	100.0

It will be seen at once that cows' milk requires considerable modification to assimilate it to the composition of human milk. It must first be diluted with water to reduce the proteids to the proper amount. This also, however, reduces the percentage of fats and sugar, so that we require to add a certain amount of the latter in order to bring them up to the proper proportion. This is effected by adding cream and sugar of milk. About the sugar of milk there is no difficulty, but with the cream it is not so easy. Some creams contain as low as 5 per cent. of fat, while others contain 40 to 50 per cent. Again, although good cows' milk contains 3.5 to 4 per cent. of fat, it is seldom that the milk of commerce comes up to this standard. In my own neighbourhood repeated examination of milk purchased from various vendors never gave more than 3 per cent. of fat, and the amount was oftener near 2½. To remedy this I used the following method, which is now carried out for me by Mr. J. P. Gilmour, chemist, Glasgow.

A sample of the milk and cream (double cream) to be used is taken, and the fat contained in each estimated by the Leffmann-Beam method. To do this a small centrifuge is required. This process is fairly accurate, and takes about five minutes. The sp. gr. of the milk is taken with a hydrometer, and this is compared with the estimated amount of fat. A consideration of these data (amount of fat and sp. gr.) enables one to judge whether the milk has been watered or mixed with skimmed milk. If the former, a corresponding reduction must be made in the amount of proteid and sugar assumed to be present in the milk. Presuming that we found the sp. gr. fairly high (say, 1.035), but the fats low (say, 2½ per cent.), we would infer that the milk had not been watered (which would lower the sp. gr.), but had been mixed with skimmed milk, or what comes to the same thing, partly creamed. The percentage of proteids and sugar, therefore, would be the same as in good milk (as skimmed milk contains the same percentage of these as unskimmed). Now if our cream was found to contain 18 per cent. of fat, it is quite easy to arrive at the proportions necessary, bearing in mind that all ordinary creams contain the same percentage of proteids and sugar as milk. Supposing we are required to make two pints of a mixture having the composition of human milk. It is readily seen that we must use

$$40 \times \frac{1.5 \text{ (strength of human milk)}}{4.0 \text{ (strength of cows' milk)}} = 15 \text{ oz.}$$

of a mixture of milk and cream. We have next to determine



what amount of this 15 oz. will be milk and what part cream. This we get as follows:—

Let  $x$  = number of ounces of cream required.  
Then  $15x$  = number of ounces of milk.  
Now—

$$\begin{array}{rcl} 40 \times 4 & = & 18x + 2\frac{1}{2}(15 - x) \\ \text{(Fat in finished product)} & & \text{(Fat in cream)} \quad \text{(Fat in milk used)} \end{array}$$

$$160 = 18x + \frac{75}{2} - \frac{5}{2}x$$

$$122\frac{1}{2} = 15\frac{1}{2}x$$

$$\therefore x = 8 \text{ approx.} = \text{ounces of cream}$$

$$15 - x = 7 = \text{ounces of milk}$$

Now the amount of sugar in the 15 oz. of milk and cream is—

$$\frac{15 \times 4.3}{100} = 0.65 \text{ oz. (480 gr. to ounce)}$$

But in the finished product we require—

$$\frac{40 \times 7}{100} = 2.8 \text{ oz. (480 gr. to ounce)}$$

Hence we must add 2.15 oz. This is done by adding  $5 \times 2.15 = 10\frac{1}{2}$  fl. oz. of a 20-per-cent. solution of sugar of milk previously prepared and filtered. It is also usual to add a little lime-water—about an ounce to the pint—as milk bought in shops is usually acid, whereas human milk is slightly alkaline. This mixture is then made up to 40 oz. with water, filled into four  $\frac{1}{2}$ -pint bottles, fitted with suitable stoppers, and sterilised. The bottles are put in a cruet-like frame and set in a large pot filled with cold water, which is raised gradually to the boiling-point. The pot is then removed from the source of heat and allowed to cool. This is not complete sterilisation, but is sufficient to destroy bacteria, cocci, &c., which is all that is practically required. To destroy the spores prolonged boiling is essential, but this has a deleterious action on the milk.

It is obvious that the foregoing general method may be used for the calculation of the several ingredients in all possible proportions, a consideration of some practical value, since it enables the operator to prepare a milk of any composition desired by the prescriber, who often finds it necessary to vary the percentage of proteids, &c., according to the requirements of the individual case.

The cost of the milk, cream, and sugar of milk, in the proportions required by the standard formula, for Glasgow, works out at about  $2\frac{1}{2}$ d. per pint of the finished product. The centrifuge employed is of a small, convenient size, of the water-motor type, and is easily connected with the water-tap in an ordinary sink. With a moderate pressure it attains a speed of 3,000 to 6,000 revolutions per minute, and it may be purchased for about 3*l*. Mr. Gilmour only prepares the milk to order, so that he knows exactly what is required per diem, and he finds that there is a ready and profitable sale for it.

## Sublimed Sulphur.

### The Amount of Free Acid in Commercial Samples.

By EDWIN DOWZARD, F.C.S.

THE amount of free acid in commercial sublimed sulphur varies greatly, as will be seen by the figures below:—

			Free Acid as H <sub>2</sub> SO <sub>4</sub> Per cent.				Free Acid as H <sub>2</sub> SO <sub>4</sub> Per cent.
No. 1	...	...	0.006	No. 11	...	...	0.025
No. 2	...	...	0.006	No. 12	...	...	0.032
No. 3	...	...	0.006	No. 13	...	...	0.040
No. 4	...	...	0.009	No. 14	...	...	0.049
No. 5	...	...	0.010	No. 15	...	...	0.050
No. 6	...	...	0.012	No. 16	...	...	0.061
No. 7	...	...	0.020	No. 17	...	...	0.070
No. 8	...	...	0.022	No. 18	...	...	0.098
No. 9	...	...	0.024	No. 19	...	...	0.121
No. 10	...	...	0.024	No. 20	...	...	0.137

The method which I used in determining these figures was to make 20 grams of the sample into a paste with water, dilute to about 150 c.c., and filter; the sulphur on the filter was then washed four or five times with distilled water. The filtrate was titrated with decinormal sodium-hydroxide solution, using methyl orange as an indicator.

## TRADE WITH CHILI.

MR. R. E. MANSFIELD, the U.S.A. Consul at Valparaiso, writing to Washington on July 12, 1902, in regard to American drugs and druggists' supplies in Chili, says most of the crude drugs imported come from England and Germany. The American products are too high in original cost and in expense of transportation. Nearly all tinctures and fluid extracts are made in Chili, on account of the cheapness of alcohol. [This is doubtful.—Ed.] A large percentage of the compound [?compressed] drugs used are of London make, but considerable quantities are compressed by the local druggists. The tendency is to manufacture everything possible, so as to secure greater profits and at the same time supply the trade at reasonable prices, as a majority of the people are very poor, and economy is a necessary consideration. Patent medicines of American origin, generally considered, are in very good demand; but this demand can be maintained only by constant and judicious advertising.

The consumption of chemicals in Chili is increasing, but very little of the present supply comes from the United States in comparison with what is imported from Germany. Sulphuric acid mostly comes from Germany, soda and its salts from England.

American drug-sundries have considerable consumption in Chili, especially rubber goods and hose. Most of the glassware used is of German, French, and English origin, the importance of the importations being in the order named. The market at Valparaiso in this line of goods is practically controlled by one or two houses. Drug-store fixtures are mostly manufactured in the country. The duties on furniture make the importation of such articles practically prohibitory. Soda-fountains are very rare in Chili. There is but one now in use in Valparaiso, and Messrs. Griffith & Co., who have it in their drug-store, say it is practically valueless, as there is no demand for soda-water.

There is a constant demand for fancy soaps of well-known brands, also for perfumes and toilet-waters of high grades. A considerable percentage of this trade goes to the United States. American surgical appliances, especially rubber plasters, are largely used. The majority of photographic and optical goods used are from Germany, France, and England, in the order named. But in photographic supplies the United States is becoming a strong competitor. Toilet and bathroom articles are mostly imported from Europe. Much of the paint and oil comes from the United States, especially in the lighter grades; but the heavier lead and zinc paint materials come from England.

Chili is a cosmopolitan country, where the products of nearly all industrial nations may be found. The drawback to large trade in general is found in the fact that it is a limited market, due to the small population, the unstable financial conditions, and the indefinite credits that are granted.

## Recent Wills.

BERRIDGE.—Letters of administration to the estate of the late Mr. Oliver Gillett Berridge, chemist and druggist, 108 Manfield Street, Leicester, who died on October 8, 1901, have been granted to Mr. Alfred Berridge, pharmaceutical chemist, by whom the effects are valued at 2,723*l*. 17*s*. 2*d*.

DART.—The will of the late Mr. William Dart, chemist and druggist, formerly in business at 14 Southampton Street, Covent Garden, W.C., who died at Bampton, Devon, on April 7, has been proved at the Exeter Probate Registry by Mr. Richard Henry Dart, draper, of Bampton, brother, and Mr. Henry Arthur Dart, 39 Threadneedle Street, London, E.C., banker's clerk, nephew of the deceased, the executors. The gross estate is valued at 1,884*l*. 14*s*., and the net personally at 1,687*l*. 1*s*.

STONHAM.—The will of the late Mr. Thomas Goland Stonham, chemist and druggist, of 63 King Street, Maidstone, who died on May 5, has been proved by Mr. Henry Archibald Stonham, 511 Commercial Road, London, E., surgeon, son and sole executor, by whom the estate is valued at 4,516*l*. 12*s*., and the net personally 1,239*l*. 16*s*.



## Legal Reports.

### Pharmacy Act, 1868.

#### THE UNQUALIFIED SELLER.

At the Aberdeen Sheriff Court on Monday, September 10, before Sheriff Henderson Begg, William Jaffray, lately assistant in the London and Provincial Drug-store, 344 George Street, Aberdeen, was charged, at the instance of the Registrar of the Pharmaceutical Society of Great Britain—with consent of the Public Prosecutor—with having, on July 25, sold a poison within the meaning of the Pharmacy Acts—to wit, a quantity of oxalic acid—contrary to Sections 1 and 15 of the Act of 1868, accused not being a registered chemist and druggist. At the previous diet Jaffray pleaded not guilty, but when the case was again called he admitted the offence. Mr. J. S. Shewan, solicitor, appeared on his behalf, and Mr. A. C. Morison, advocate, was counsel for the Pharmaceutical Society.

Mr. Morison stated that, according to his information, accused asked the purchaser of the oxalic acid if he knew that it was poison, and on being told that the purchaser did know, Jaffray said he must be careful, as they could not sell it to everybody in that way. From that statement Mr. Morison inferred that accused knew he was committing a contravention of the Act, the principle of which was that the public got their protection through the sale of such poisons being confined to qualified persons. He understood that a correspondence had passed between the managers of the company and the Pharmaceutical Society, and they took the responsibility for the offence committed.

Mr. Shewan said in regard to that correspondence he had nothing whatever to do. The whole intention of the Act, he admitted, was to defend the public against persons not properly qualified. The facts of this case were that in the drug-store there were three assistants, and accused was the junior. He had served an apprenticeship of five years in an Aberdeen shop, had been eight and a half years in a first-class shop in Glasgow, and afterwards three years with a well-known chemist in Aberdeen. His experience had been very considerable, and he was a most capable assistant. A peculiar thing about the matter was that Jaffray was away from this situation before the indictment was served upon him. Mr. Shewan said further that oxalic acid was one of the most commonly sold poisons, and was sold every day by chemists' assistants and apprentices. He took the trouble to investigate the matter, and he had in his possession thirteen samples of oxalic acid purchased from various shops in town, and sold to him by unqualified assistants.

Mr. Morison: The Pharmaceutical Society will be much obliged for the information.

The Sheriff: You are a dangerous character, Mr. Shewan. (Laughter.) What are you to do with all the acid? (Laughter.)

Mr. Morison: It certainly reveals cases for prosecution.

Mr. Shewan: The time to get the acid is when the principal is away. (Laughter.)

The Sheriff: That shows the necessity for a prosecution of this kind.

Mr. Shewan: But it also throws light upon how the Pharmaceutical Society brings this prosecution. The case is really directed against drug-stores because they cut prices. If the leading officials of the Pharmaceutical Society in Aberdeen have sold me bundles of oxalic acid by the hands of unqualified assistants it is rather hypocritical to bring this prosecution. If it had been brought in the public interest at the instance of the Procurator-Fiscal I would have had nothing to say, but it is really a trade-union matter. Upon these grounds, and also because accused was a man of great experience, and the acid had been sold to an ex-constable, and further because accused was out of the employment of the proprietors of the store when the charge was brought, Mr. Shewan asked that a modified penalty be imposed.

Sheriff Henderson Begg fined Jaffray 1*l.*, with 1*s.* 5*d.* of expenses.

### Sale of Food and Drugs Acts.

#### POTASH-WATER.

At Berwick on September 4, William Tait, merchant, Hide Hill, was charged with supplying potash-water which on

analysis was found to contain no potash but to be merely aerated water. In explanation, defendant said that the machine had been used for lemonade, and the bottles sold to the Chief Constable for sample had been taken before the potash had come down the pipe. Defendant was fined 2*l.* for what was described as a technical offence.

#### SODA-WATER.

In the Peterhead Sheriff Court on September 5, Thomas Yelton Ogilvie, brewer, Dollar, was fined 3*l.* for having sold forty-eight bottles of soda-water, which on analysis were found to be devoid of bicarbonate of soda and to contain 0.14 gr. of copper per gallon.

## Bankruptcy Report.

*Re* THOMAS HENRY LOMAS, 227 Crookes, Sheffield, Drysalter.—A meeting of creditors was held at Sheffield on September 5. The statement of affairs showed unsecured liabilities amounting to 60*l.* 0*s.* 7*d.*, and for rent, &c., 5*l.* 15*s.* The assets were estimated to realise 32*l.* 2*s.* 10*d.* Debtor commenced business with a capital of 30*l.*, a year and a half ago, and prior to that time had acted as chemist's manager at a salary of 1*l.* 18*s.* a week. He had been sued by the Pharmaceutical Society for offences under the Pharmacy Act, and on the last prosecution judgment was given against him for 10*l.* 5*s.* and costs. On account of this he filed his petition. The winding-up of the estate was left in the hands of the Official Receiver.

## Gazette.

### Partnerships Dissolved.

**Anderson, J., sen., Anderson, J., jun., and Anderson, S.,** under the style of Joseph Anderson & Sons, chemical-manufacturers and merchants, Manchester.

**Bateman, F., Evans, H. L., and Hawes, G. C. B.,** under the style of Bateman, Evans & Hawes, Pangbourne, Streatley, Whitechurch, and Goring, surgeons.

**Dibden, W. J., and Thudichum, G. D.,** Edinburgh Mansions, Victoria Street, Westminster, S.W., analytical and consulting chemists.

### The Bankruptcy Acts, 1883 and 1890.

#### ADJUDICATION.

**Ratcliffe, Emma** (trading as James Ratcliffe), Bolton, Lancashire, mineral-water manufacturer, widow.

## New Companies & Company News.

**EMPRESS TEA-STORES (LIMITED)**, with a capital of 15,000*l.*, in 1*l.* shares, takes power to carry on the business of dealers in drugs, chemicals, &c. No address given.

**WILLIAM JONES (LIMITED)**.—Capital 1,000*l.*, in 1*l.* shares (500 preference). Objects: To carry on the business of wholesale and retail druggists, manufacturing and analytical chemists, manufacturers of surgical instruments and medicinal and surgical requisites, dealers in and agents for pharmaceutical preparations, wines and spirits, &c. The first subscribers are: W. Jones, 147 High Street, Tewkesbury, chemist; Mrs. E. Jones, 147 High Street, Tewkesbury; Miss A. I. Jones, 147 High Street, Tewkesbury; G. A. Bettinson, Cole Bank, Hill Green, Birmingham, solicitor; C. S. Watson, 45 Medicott Road, Sparkhill, Worcestershire, solicitor; T. H. Cleaver, 23 Willows Road, Balsall Heath, article clerk; and A. C. Arton, 6 Percival Street, Leicester, clerk. No initial public issue. Table "A" mainly applies. Registered office, 147 High Street, Tewkesbury.

**BRITISH SOUTH AFRICA EXPLOSIVES COMPANY (LIMITED)**.—Capital 1,100,000*l.*, in 1*l.* shares. Objects: To adopt an agreement with De Zuid Afrikaansche Fabrieken voor Ontploffbare Stoffen Beperkt (incorporated under the laws of the late South African Republic), and to carry on the business of explosive, gunpowder, ammunition, and chemical manufacturers, commission-agents, and any business in any way connected with the manufacture, production, storage, insurance, transmission by land or sea, exportation, importation, and sale of and dealing in nitro-glycerin, dynamite, blasting-gelatin, gelatin dynamite, geglignite, blasting-powder, gun-cotton, gunpowder, sporting powder, military powder, ammuni-



tion, cartridges, fuses, detonators, fireworks, and other kinds of explosive substances and blasting, ballistic or pyrotechnic apparatus, acids, chemical elements or compounds, chemical or mineral substances, and other articles and things of a similar or analogous description or use, &c. The first subscribers are:—F. H. Goodwin, 27 Dynevor Road, N., clerk; E. T. Church, 2 Kepler Road, Clapham, S.W., clerk; G. Troughton, 2 Bloompark Road, Fulham, S.W., clerk; H. W. Brown, 65 Mackenzie Road, Beckenham, clerk; F. H. Riches, "Alverstoke," 44 Shenley Road, Camberwell S.E., clerk; A. D. W. Lawson, 43 Forest Drive West, Leytonstone, N.E., clerk; and A. S. Cohen, "Jesmond," 18 Compayne Gardens, S. Hampstead, solicitor. No initial public issue. The number of directors is to be sixteen, of whom six shall be non-British and ten shall be British. One, but no more, of the latter may be British by naturalisation. The subscribers are to appoint the first directors. No qualification required for a director appointed before the distribution of the shares of this company to be received by the liquidator of De Zuid Afrikaansche Fabrieken voor Ontplofbare Stoffen Beperkt under the above-mentioned agreement; afterwards 1,000*l.* Remuneration, 2,550*l.* per annum, or 10 per cent. of the net profits remaining after deducting reserve and paying 5 per cent. on the shares (whichever shall be greater), divisible.

**THE PHOTOGRAPHIC ASSOCIATION (LIMITED).**—In the High Court of Justice on Wednesday, September 10, the case of Barclay & Co. v. the Photographic Association (Limited) came on. Counsel for the plaintiffs said this was an application on behalf of the plaintiffs, who were debenture-holders, for a receiver and manager of the defendant company. It had stood over before in the expectation that the plaintiffs would be paid off, but that had not been done. Mr. Vernon, who appeared for a second-debenture holder, asked that whatever order might be made should not be drawn up for ten days, because the priority of the plaintiffs' debentures was disputed, and on the ground that there was no urgency. Mr. Justice Swinfen Eady said he could not delay. The order must go. He should appoint a receiver and manager in terms of the motion.

**KEMP & CO. (LIMITED).**—The report of the directors of this company for the year ended June 30 has been issued. The balance at credit of profit-and-loss account is 34,400*l.* 15*s.* 1*p.*, which the directors recommend for disposal as follows: Dividend of 8 per cent., 28,000*l.* 0*s.* 4*p.*; deterioration of building, plant, and furniture, 1,441*l.* 11*s.* 4*p.*; bonus to staff, 3,700*l.*; to reserve fund, 1,259*l.* 3*s.* 9*p.*. This last item now stands 2,33,346*l.* The branch at Esplanade has been removed to Colaba, the former premises being too expensive. The vacancy in the board of directors caused by the continued ill-health of Dr. Blaney, which necessitated his retirement, was temporarily filled by the nomination of Mr. A. Pell.

## Dewsbury Chemists' Association.

**T**HE members of this Association opened their winter session on Monday evening, September 8, at the Church House, Dewsbury, the President (Mr. R. Gledhill) in the chair. There was a good attendance of members. The President, in the course of his opening remarks, mentioned that Mr. John Harrison has accepted an invitation to attend the annual dinner of the Association.

### FIXED PRICES.

The Secretary (Mr. G. Walker) read the Glasgow and West of Scotland Chemists' Trade Association circular as to fixed wholesale and retail prices of proprietary medicines. It was agreed to refer the matter to the proposed

### WEST RIDING FEDERATION.

The Halifax and Barnsley Associations approve of the proposal to form this Federation. Mr. W. Stead, in opening a discussion on the subject, announced that, owing to his retirement, he would be debarred from taking any part in the scheme, but considered that he had already done his part. Of the eight associations in the West Riding, six supported the scheme—viz., Barnsley, Bradford, Halifax, Huddersfield, Wakefield, and Dewsbury. He moved that each association be invited to appoint two representatives to attend a meeting to be held at Dewsbury on September 30.

The President and Mr. R. Broadhead were elected to represent the Dewsbury Association.

It was decided to hold the annual dinner on October 21,

and it was stated that Messrs. Harrison, Glyn-Jones, and Gifford would be among the invited guests.

Mr. Broadhead introduced the question of the

### RESTRICTION OF TITLES

in a humorous speech. The question was, "Did the House of Lords decide the question of titles at all?" His answer was, "No." There could be no doubt on that point. The House of Lords decided that it was impossible for a qualified person and a company to perform an identical act at the same time. He proceeded to criticise the attitude of the *Pharmaceutical Journal* and *THE CHEMIST AND DRUGGIST* on this question, saying the position of the *Journal* was now one of autocratic despotism. The attitude of the *C. & D.* was at least consistent—that journal always having been the advocate of limited companies. [Ridiculous.—EDITOR.] He, however, did not expect that his letter to the *C. & D.* should be answered by a long extract from the *Pharmaceutical Journal*. That was the hardest blow he had had since he took an active part in pharmaceutical politics. The devil could quote Scripture when it suited his purpose, and for the *C. & D.* to quote the *Pharmaceutical Journal* in support of its contentions was to give points to Beelzebub. (Laughter.) The man who served his apprenticeship and was a smart business-man, but did not get a statutory qualification, was becoming a danger. The Society is afraid of winning a test-case. Let it be generally known that it refuses to take a test-case, and it will be competent for every little branch co-operative store to stick up "chemist and druggist" over its doors. The unqualified man would carry the titles right through the country, for the companies would show that the value of the titles as a business asset was ten times more than the poison schedule. He proceeded to move the following resolution:—

That this meeting of the Dewsbury and District Chemists' Association is of the opinion that it is the duty of the Pharmaceutical Society, and not of individual chemists and druggists, to institute proceedings in cases of infringements of the Pharmacy Act, 1868, the suggestion of the official organ notwithstanding. This Association is also of opinion that we have sufficient outside enemies without supporting a *Journal* for the purpose of disparaging an honourable and perfectly legal title, which is now being prostituted by every variety of retail trade through the indifference and culpable negligence of the Pharmaceutical Society.

Mr. Day remarked that Mr. Bremridge had stated that the question had been thoroughly threshed out, and that the Society would not have a ghost of a chance in a test-case.

Mr. Pickard: Then we are asked to qualify for a position which is false and rotten.

Mr. Broadhead remarked that all the nonsense about having a losing case had cropped up at once. It was a losing case because it looked so much like a winning case. Recent counsel's opinion was in favour of the House of Lords reviewing the whole case. The Reece case settled it.

Mr. Pickard said that they were asked to stoop to the wishes of a few of the old-established firms.

Mr. Broadhead expressed the opinion that the Act was being perverted for the sake of a certain class, to whom a test-case would be inconvenient.

The President asked whom they should believe, the journal which said that the highest opinion had been taken, or the member of the Council who said that no opinion had been taken since 1885.

Mr. Broadhead said that the Council did too much *in camera*, which was a slur upon their intelligence. The *Journal's* methods were not methods of true enlightened justice.

Mr. Stead said the assertion that it was the duty of individual chemists to take proceedings was absurd and astounding.

Mr. Gutteridge seconded the resolution.

Mr. Pickard spoke in support, and said that when it was seen that large companies could use the title with impunity they would find themselves surrounded with all classes of people using the title which had cost legitimate chemists so much to attain. The question should be decided once for all. If they had not a right to the title the Society had no right to hold examinations, and they had no right to educate lads for a ridiculous position.

After further discussion the resolution was unanimously carried.





**TO CORRESPONDENTS.**—Please write clearly and concisely on one side of the paper only. All communications should be accompanied by the names and addresses of the writers. If queries are submitted, each should be written on a separate piece of paper. We do not reply to queries by post, and can only answer on subjects of general interest.

#### A Deteriorated Spirit.

SIR,—In your issue of September 6 we notice a report of a case tried at Barnard Castle Police Court, wherein defendant was fined for selling sweet spirit of nitre deficient in ethyl nitrite, this having been supplied to Mr. Wood, of Bishop Auckland, by us. This article was of our manufacture, and when it left our place was fully up to the British Pharmacopoeia standard; but as it was supplied in November of last year to Mr. Wood, and was sent out by Mr. Wood in April to his customer, we think we can hardly be held responsible for the deficiency found by the inspector on his analysis.

Yours faithfully,

GOODALL, BACKHOUSE & Co.

Leeds, September 10.

#### Exporting Tinctures.

SIR,—Referring to the account in your last issue of my interview with the Birmingham reporter respecting the new alcohol legislation, and your footnote touching the difficulties experienced by the English manufacturers in exporting spirituous preparations, I cannot agree that any serious exaggeration was made by either myself or the reporter. On turning to the laboratory journal of my firm I find that 122 alcohol-assays have been made since the beginning of the year for export-purposes. In my experience estimations of alcohol have constantly to be made in spite of the greatest precautions being taken to obtain uniformity of alcohol percentage in tinctures and similar preparations. Nor in the case of tinctures standardised by our process is the taking of the sp. gr. sufficient, since the amount of extractive matter in the tincture will vary according to the proportion of active principle present in the drug used for making the tincture. In addition to the analytical work involved, considerable time is required in calculations for drawback, and we in Birmingham should most certainly regard it as a very considerable relief if we were able to send tinctures abroad with the same freedom as we do to various parts of this country.

I am,

Yours obediently,

JOHN BARCLAY.

Birmingham, September 10.

#### An Explanation.

SIR,—In reference to the recent case dealing with terpeneless oil of lemon reported in your valued journal, we should like to draw attention to one point in justice to ourselves. As you are aware from our advertisements in your journal, we guarantee our terpeneless oil of lemon to be absolutely free from terpenes, and for nearly two years Mr. E. J. Parry has examined it and regularly reported it as free from terpenes, we holding his reports to this effect. In the report of his evidence in that case he is stated to have said that he had examined eight different brands of the oil and only found one to be free from terpenes. We have therefore written to Mr. Parry, and he authorises us to say that he qualified this statement with the fact that these were examined in 1899 for the purpose of publication in his book on essential oils, before we commenced making the product, and that he stated in court that "early in 1901 Messrs. Fratelli de Pasquale & Co. placed an absolutely terpeneless oil on the market."

Yours faithfully,

FRATELLI DE PASQUALE & Co.

Messina, September 2.

#### Qualification and Apprenticeship.

SIR,—Your leading article entitled "Qualification" is in my opinion one of the most commonsense views yet expressed

in the pharmaceutical Press. The gist of the whole matter appears to me to be that, in the interest of those in business and every man yet to come into the business, proper apprenticeship for a period of at least three years should be imperative; by this means, and this means only, will those in business be able to secure apprentices, and the apprentices themselves be properly trained in the routine of that business which they purpose following. A curriculum is not necessary in the sense which this word usually signifies, but what the craft does want is compulsory apprenticeship; indeed, this view was expressed in the *Pharmaceutical Journal* by the late William Martindale and myself as long ago as February, 1888, and yet the committee appointed by the Society has only just arrived at this conclusion by requiring that the three-years' service paper shall be more thoroughly investigated before acceptance. Provided the Qualifying examination be divided and the present regulations properly enforced, we have sufficient machinery to meet supply and demand, both as regards business and education. Personally, I served five years' apprenticeship in the country, making all B.P. galenicals, and have never regretted it. The moral is: Support the Society, keep knocking, and the craft will ultimately get what it wants.

I am, Sir, faithfully yours,

FREDERICK DAVIS.

Imperial College of Pharmacy, Ludgate Circus, E.C.,  
September 8.

#### The Veterinary Profession.

SIR,—In your Educational Number—that part of it referring to veterinary surgeons—you say, "Army veterinary appointments are open for competition." True, but some facts need emphasis. The standing army is 25 per cent. short of its complement of veterinary officers, and the schools have boycotted the Service, until better terms shall be granted. In to-day's paper, the official foot is seen lowering itself gently on to the top rung of the ladder it has to climb down. The announcement runs as follows:

The Secretary of State for War proposes in the autumn to assemble a small committee, including representatives of the military and civil branches of the veterinary profession, with the view of considering whether any alterations are necessary in the terms under which officers now serve in the Army Veterinary Department.

During the late war American and other veterinary surgeons had to be engaged, and old Army practitioners were reinstated for the work. A number of incompetent men were placed in charge of Government animals to the value of fifty thousand pounds, and many horses with catarrhal symptoms were shot, as being glandered. The country has been a great loser for want of vets. holding the British or other satisfactory diploma.

With regard to the Fellowship examination I may say that the writing of a satisfactory thesis is not enough to pass a man for the so-called higher degree, but a very stiff examination is now required. The Fellowship has not been hitherto much valued, as many of the foundation Fellows (who of course elected themselves) were—well, not representative of the cream of the profession. In time to come, the Fellowship will have an appreciable value, where public appointments, &c., are in question. I venture to offer these remarks, as I find the veterinary surgeon's position, attainments, and status very much misunderstood and underrated by chemists. The mere fact of a four years' curriculum (as a minimum) should be sufficient proof to scientific men like modern chemists that the vet.'s attainments are not inferior to their own.

September 5.

OLD OBADIAH. (48/59.)

#### The Titles Question.

SIR,—It is plain that feeling in regard to the titles question is so strong throughout the country that those in authority will be unwise to ignore it much longer. I am of opinion that this point is not of vital importance to pharmacy, certainly nowhere near being so important as the open-door question. It is only during recent years that drug-stores men have begun to use the title "cash chemists," and I doubt much whether this further act of spoliation on their part has done them much good, or us much harm. On the whole I am inclined to think that the old title "drug-store"



is more valuable to these men than the newer one of "cash chemists," and is more injurious to us. At the same time, these men have as little moral right to the use of our titles as they have to the practice of our profession, and if anything can be done it ought to be set about at once. I do not think, however, that the title "chemist" constitutes good ground on which to fight. It is not exactly applicable to our calling, and it does not exclusively belong to us. There are scientists, chemical-manufacturers, and wholesale firms who use this title, without having the pharmaceutical qualification, who would probably be able to prove their right to do so in the Law Courts. The title "pharmacist" would be a better one to fight on. It might be well if qualified men throughout the country would slowly drop the use of the title "chemist" and take up the title "pharmacist." It applies to our calling only. Should limited companies follow us on to this ground, I think a test-case would then be advisable, and might be successful. There can be no doubt whatever that, as you have repeatedly pointed out, the titles question is exactly in the same position as the open-door question, but the decisions given under the Pharmacy Act have been so inconsistent and inharmonious that there is absolutely no saying what the decision might be in this case, and it is not to be wondered at if there is sufficient of the sporting spirit in pharmacy, to create a general feeling in favour of an appeal to the chances of the Law Courts.

I note that "Xrayser" says, in referring to the open-door decisions: "No man who has studied the subject carefully can dispute the sound basis on which the Law Lords formed their opinion. It is a fact that when the Pharmacy Bill was under discussion in Parliament no allusion of any kind was made to companies or co-operative societies who might wish to run a drug-department." I am astonished that a sentence like this should fall from the pen of "Xrayser." No allusion was made to these societies because no allusion was necessary. When an Act of Parliament is passed having so general an application as the Pharmacy Act, it is binding on every man in the Kingdom, and does not need to state clearly that various sections of the community must obey it. I will be obliged to "Xrayser" if he will point out any other Act at all similar to the Pharmacy Act which is binding on a private company but not on a limited one. We have seen recently that a limited company pleaded exactly on the same lines which led to success under our Act, in the case of a prosecution under the Food and Drugs Act, but without success. If the same absurd decision had been given under the Food and Drugs Act which was given under ours, it would have led to assistants in limited companies being prosecuted for selling margarine for butter, just as it has led to assistants in our calling being prosecuted for selling poisons. The Law Lords said a limited-liability company was an impersonal person. These words are mouth-filling, and no doubt the particular Lord who stumbled on them thought them clever, but they mean nothing. There is not, and never can be, an impersonal person. This world does not admit of the generation of monstrosities of that kind. A company because it is limited is not placed outside ordinary civil law. In a private company an unqualified sleeping-partner cannot be prosecuted under the Pharmacy Act, because he is only financially concerned, but if he becomes an active partner he can be prosecuted. It would have been good law if this had been the case with limited companies. The shareholders are sleeping-partners, but the directors are active partners, and were the right men to prosecute from the start. There is absolutely no justification in the Pharmacy Act for the prosecution of assistants. The first false step of declaring the masters not responsible has led to the second, of finding that the assistant is the seller; but this was never meant in the Pharmacy Act, and there is no other Act under which a mere assistant is looked on as the seller. It would be absurd to make an assistant responsible for the quality, and it is absurd to make him responsible for the kind, of goods sold. He is not in law or in common sense the seller. Again, it has been found that, although the masters cannot be prosecuted for keeping open shop, and the assistant can be prosecuted for selling poisons, if any harm results from such selling, the masters must pay the damages. Can any man who studies the whole subject say that an absurd, absolutely ridiculous tangle like this is according to good law? Perhaps, however, "Xrayser" does not think all

these decisions are sound, although he believes in the "impersonal person" myth.

Dumfries, September 8.

JAMES REID.

[We may point out that by Section 15 of the 1868 Act the title "pharmacist" is reserved to pharmaceutical chemists, also that Mr. Baron Pollock and Mr. Justice Hawkins, in the Queen's Bench Division of the High Court, on April 21, 1890, decided that it is unlawful under Section 15 for an unqualified assistant to a duly qualified chemist to sell poisons in his master's shop in the ordinary course of business. It may be desirable to point out, further, that a properly constituted partnership between a chemist and druggist and unqualified person for the purpose of keeping open shop for the sale of poisons brings the unqualified person within the scope of the Pharmacy Act. If by "sleeping-partner" Mr. Reid means a person who lends money to a chemist, and receives interest for it, such a person does not infringe the Pharmacy Act, but he would if he were to put the money in the business and take his share of the profits. We make this explanation because we are frequently asked questions about the matter.—**EDITOR.**]

SIR,—“Xrayser’s” contribution to the titles debate is smart. “Xrayser” is an excellent judge of smartness, but as to what is useful? I only expected to be useful in one way, and I am more than satisfied with the result. It is very useful indeed to get the admission of “Xrayser” that the use of the titles by unqualified persons is anomalous, absurd, and unjust. Some time ago when discussing chemists’ businesses and corporate bodies, “Xrayser” told us that “every shop opened by a limited company is a property illegitimately acquired.” “Xrayser” will no doubt concede that it would not have been either unjust or illegitimate for companies to open shops and use the titles before 1868; then why is it unjust or illegitimate for them to do so now if the House of Lords said that the Pharmacy Act had not altered matters, and “consequently they could keep open shop for the sale of poisons and use titles as freely as they might before the Act”? Whatever in the name of level-headed common sense is “Xrayser” driving at? Prior to 1868 there was no necessity to form companies to evade the Pharmacy Act, and if companies had wished to run chemists’ shops before 1868 they would have been exactly in the same position as private persons at that time, and could have sold poisons and used the titles without any conditions whatever. But since the passing of the Act companies have been under the compulsion, which is not synonymous with freedom, of employing registered chemists to sell poisons; and if that is keeping open shop for the sale of poisons as freely as they might prior to 1868, then “Xrayser” has a restricted and conditional idea of a proper sense of freedom.

“Xrayser” asserts that the Judges of the House of Lords said that companies had not been legislated for in that Act (the Pharmacy Act), and, consequently, they could keep open shop for the sale of poisons and use titles as freely as they might before the Act. The Judges said nothing of the sort, as what follows “consequently,” and the question of titles was neither brought up nor any decision given on it. To assert, as “Xrayser” really does, that the House of Lords said that companies could use the titles as freely as they might before the Act is either untrue or every person, from the Council down, who takes the trouble to argue the question at all must be an idiot. But I am prepared to state that we are not all so stupidly silly as that assertion implies, and that “Xrayser’s” assertion is untrue. I regret that the contradictory statements and verbal hair-splitting which afflict our self-constituted judges necessitate a downright distinction between fact and fiction.

The Judges gave no decision on the titles question, the only people who have decided that question are Messrs. “Xrayser” & Co., who, if not the judges of the House of Lords, are “quite as good and much cheaper.” Most chemists and druggists have swallowed enough abuse about the substitution-trick and they are not having any this time. As to the logical value of my arguments being gauged by my discovery that the firms who are trading under old names might be affected in a decision to restrict the title to the holder of the certificate, I pointed out that any such interference would be the only argument which would deter me from advocating the taking of a test-case, as I should be the last to wish old-established and honourable firms to suffer the slightest inconvenience. “Xrayser’s” assurance that their case is quite different from that alleged against companies relieves my mind of any doubts as to the advisability



of seeking a legal judgment, and I tender my thanks to "Xrayser" for pointing out that my difficulty on that point is only a mare's nest. I am also at one with "Xrayser" on the question of the injustice of the use of the titles by unqualified persons when he asks, "Is it illegal?" I also ask, "Is it illegal?" I am not smart enough to answer that question—"Xrayser" is.

Batley, September 9. R. BROADHEAD.

#### Might have been Different.

SIR,—I observe that the Holborn Vestry has decided not to appeal in the soap-liniment case. This is the most important case of its kind ever tried before a magistrate. It will have far-reaching effects. It sets at rest, as far as it goes, the question of a commercial value for B.P. preparations. The decision is of immense advantage to chemists and druggists generally. It is a great gain to the whole retail trade and a benefit to the public. My object in writing, however, is not to dilate on the advantages of the decision of the Bow Street Magistrate, but to draw attention to the means employed to bring about such a decision. If the case had not been taken up by the Chemists' Defence Association, and if Mr. Glyn-Jones had not so masterly chosen his witnesses for the defence, the verdict would no doubt have been different. The case was well studied, and taken up with a great, but quiet, show of life and energy. After the consideration of this and other cases which the Chemists' Defence Association has defended, it makes one feel that every chemist should become a member without delay, for his own sake. There are yet three other cases for the Appeal Court, and as these cannot be conducted without money, it appears opportune to remind those who have not yet sent in a subscription to the Defence Fund to do so.

Yours obediently,

68 Fleet Street, E.C., GEO. P. POND.  
September 8.

#### Sale of L., C., and L. Lozenges.

SIR,—If the "linseed, chlorodyne, and liquorice lozenges" sold by unqualified men do not interest our energetic Council, why does not the "Food and Drugs" man have a look in—"not according with the nature and quality," &c.? I have occasionally given some small sweet-shop keeper a bad quarter of an hour by explaining the law to him, and showing him the two horns of the dilemma upon which he was seated.

Yours faithfully,

WILTS. (61/39.)

#### Drug Company Directors.

SIR,—It is possible, if not probable, that Parliament may be persuaded to amend the Pharmacy Act of 1868 in the direction proposed by the members holding extreme views. In my opinion such an amendment would be a boomerang in the sense of reacting injuriously on many of its authors.

I have not been a director of a drug store company for several years, but my experience then was that the board acted in a fiduciary position as a selected committee to protect the investments of the shareholders. The managing director was responsible for carrying on the business in accordance with the law. He is a pharmaceutical chemist by examination.

If, in future, each individual member of the board must be a pharmaceutical chemist it is logical that every shareholder must also be qualified. It necessarily follows that executors or trustees of deceased chemists carrying on a business for the benefit of survivors must be of that trade. Loans or advances to young beginners or impecunious persons should be illegal except from similar qualified sources. If it is found impossible to enforce such conditions, and in face of such obstacles the Act is still amended, it will be found that present or future boards of drug companies will consist of one or two directors fully qualified and whose names alone will be published, while the shareholders will appoint paid committees selected from their number to carry on the financial and commercial part of the business.

Yours truly,

EX-CHAIRMAN. (61/70.)

## Dispensing Notes.

### Deliquescent Powder.

SIR,—The following prescription for a powder—a common one in Glasgow—has frequently been dispensed by me satisfactorily, but a batch made up recently was brought back in twenty-four hours quite liquid on the top and caked underneath. Can any of your readers suggest the reason? I used Howards' chemicals, and dried each separately.

Yours,

M. C. (37/55.)

Sodii bicarb. ...	...	...	...	...	...
Sodii phosph....	...	...	...	...	...
Potass. bicarb.	...	...	...	...	...

A quarter of a teaspoonful in milk and hot water for a dose.

## Legal Queries.

61/29. *Ifem Bach.*—The Workmen's Compensation Act does not apply to chemists' shops.

62/64. *Semina* in the spring sold mangel-seed in mistake for beet-seed, and now asks us if he is liable for any loss sustained by the grower. [He is.]

63/40. *Quarites.*—There is no law to compel anyone to put ammonia solution, nitric acid, or spirit of salt in any particular kind of bottle. Certainly they should not be put into bottles used for beverages.

63/63. *J. W. S.*—It is perfectly legal to sell single powders (or more) from a stamped box of Steedman's powders, provided they are not further enclosed. The same also applies to pennyworths of Beecham's pills, which must not, however, be reboxed, but twisted up in a piece of paper, as this is not considered to be an "enclosure" within the meaning of the Act.

61/55. We are indebted to *Mr. M. Manks*, of Messrs. F. Schutze & Co., for a label for nursery-lotion marked by the Inland Revenue Department. In this the word "parasites" is erased in order that the label may be freed from liability to duty. It appears from this that the Board of Inland Revenue consider parasites to be a malady. That may be a perfectly sound contention in some instances—*e.g.*, ringworm—but we question if it would hold in the case of lice.

59/49. *Tibby.*—The goods of a carriage-paid order are the property of the consignors until they are delivered to the consignee. The consignors do not change the law by sending the goods "carriage forward" and deducting the amount of carriage from the price of the goods. In the event of non-delivery of the goods to the consignee, the consignors should lodge a claim with the carriers. It is, of course, the duty of the consignee to acquaint the consignors of the non-arrival of the goods.

57/59. *Wulfram* sends us an extract from a will, by which various articles, including musical instruments, are left to different individuals, and the trustees are ordered to pay to the wife of the deceased the income of the whole of his real and personal property during her lifetime. The articles bequeathed have not been distributed, and the widow has been advised by a solicitor that she has a life-rent of everything. Is this right? [So far as we can judge from the extracts from the will, given by our correspondent, we do not agree with the solicitor's view that the wife is entitled to retain the specific legacies during her life; but extracts are likely to be very misleading. The articles specifically bequeathed could not by any stretch of imagination be considered "income," and should, therefore, have been handed over as soon as the debts were paid. The residuary legatee is entitled to be informed as to the amount of the estate and the manner in which it is invested, and should write and ask the trustees to furnish such information.]



## Miscellaneous Inquiries.

57/46. *E. B. K.*—We think your decision is wise.

*Chemist.*—It is waste of time to write to us without sending name and address.

14/8. *Feminaxmas.*—Sorry the verses are not quite up to standard; in fact, the subject is unpoetic.

48/34. *A. R.*—We have no formula for a "face enamel that will only require renewal about every three days."

30/69. *W. W.*—Dead Black for Rifle-sights.—Ivory black, mixed with spirit varnish diluted with spirit, makes a dead black which is easily removed by rubbing.

47/62. *Saratoga.*—Artificial Vanilla-essence.—The following is the formula which you require:—

Powdered tonka-bean	...	...	3j.
Peruvian balsam	...	...	5j.
Oil of sweet orange	...	...	3ss.
Tincture of orris	...	...	3ij.
Essence of musk	...	...	3ss.
Rectified spirit	...	...	3iv.
Water	...	...	3ij.

Mix the balsam and 2 dr. of light carbonate of magnesia with 1 oz. of the rectified spirit, add the other liquid ingredients in their order, and finally the tonka-bean. Macerate eight days and filter.

29/60. *W. M. M.*—We daresay it is very funny, but if we printed it most of our readers would think they were Scotchmen in need of Sir Victor Horsley's cranium-saws and the like.

59/49. *Tibley.*—Sal Soda is sodium carbonate. That is a name commonly used for it in the United States, whence your formula for a disinfectant comes. That formula is not a brilliant effort, as you may judge from the fact that it contains common salt as well as sal soda and hydrochloric acid.

50/63. *Semper Eadem.*—Cheap Cough-mixture.—The following formula yields a similar product to the sample you send:—

Powdered liquorice-juice	...	...	3ij.
Hot water	...	...	0j.
Mix and heat in an enamelled saucepan till the liquorice is dissolved, and strain. To the strained liquid add—			
Essence of peppermint	...	...	3iss.
Tincture of capsicum	...	...	3ij.
Spirit of chloroform	...	...	3iss.
Water to make	...	...	3xxiv.

The adult dose is a teaspoonful.

54/52. *J. R.*—Raspberry-vinegar:—

Fresh raspberries	...	...	3 lbs.
White-wine vinegar	...	...	3 pints

Place together in a glass vessel, stir frequently for three days, then press and strain. In each pint of the strained liquor dissolve 1 lb. of sugar.

54/36. *Country.*—Wheat-dressing:—

Iron sulphate	...	...	6 lbs.
Copper sulphate	...	...	2 lbs.
Crude carbolic acid	...	...	2 oz.

Mix and pack in 1-lb. packages. Each package is the quantity to use for 8 bushels of wheat.

57/14. *J. T. L.*—Egg-julep like your sample:—

Primrose soap	...	...	2j.
Powdered borax	...	...	3ss.
Solution of potash	...	...	3iij.
Solution of ammonia	...	...	3j.
Oil of geranium	...	...	℥xx.
Oil of lavender	...	...	℥x.
Tincture of saffron	...	...	3ij.
Rectified spirit	...	...	3j.
Distilled water to	...	...	0j.

Shred the soap, cover with water, and allow to stand all night. Next morning rub the soap smooth in a mortar, add the other ingredients, and strain.

## Information Wanted.

20/41. What is "Myroca oil," used in veterinary practice?

60/65. Bottles for kid-revivers and boot-dressings: where obtainable?

63/60. Agents in England for "Helmet" brand metal-polish, made by Vogt, of Berlin.

52/42. Who are the makers of "Popoff," a preparation for killing wasps, &c., sold in the Midlands?

## Trade-marks Applied For.

Objections to the registration of any of the undermentioned applications should be lodged with C. N. Dalton, Esq., C.B., Comptroller-General of Patents, Designs, and Trade-marks, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C., within one month of the dates mentioned. The objection must be stated on Trade-marks Form J, cost £1, obtainable through any money-order office.

(From the "Trade-marks Journal," September 3, 1902.)

"CARBOSIL" (no claim for "Carbo"); for chemicals. By J. Crosfield & Sons (Limited), Bank Quay, Warrington. 247,667.

"VIOLETTINE" (no claim for "Violet"); for a synthetical perfume. By Max Philipon, 3 Savage Gardens, E.C. 247,686.

"PNUMAPANT"; for chemicals. By Wallach Brothers, 57 Gracechurch Street, E.C. 247,865.

"SAVACCA" and picture of cow; for a medicine for cows. By the Cow-drink Company, Billingford, East Dereham, Norfolk. 247,930.

"TEAGUELINE" and device of a dandelion-plant; for herbal packet-medicines. By W. Teague, 12 Frederick Street, Cardiff. 246,698.

"HEROPHOSPHITES"; for a pharmaceutical preparation. By Schieffelin & Co., New York, c/o T. Christy & Co., Old Swan Lane, E.C. 247,499.

"ECZEDERM"; for chemicals. By Davies, Gibbins & Co., Derby. 247,504.

"CHLOR-EGIA"; for chemicals and confectionery. By Thos. Kerfoot & Co., Ashton-under-Lyne. 247,542 and 247,543.

"RUDOK"; for chemicals. By A. Bishop (Limited), 48 Spelman Street, N.E. 247,863.

"PELLOID"; for scientific instruments. By Kodak (Limited), 43 Clerkenwell Road, E.C. 247,557.

"PERI-BENE" and picture of child and crescent; for perfumery and toilet articles. By T. F. Percival, 3 Yew Tree Road, Walton, Liverpool. 247,089.

"BILLET DOUX"; for perfumery and toilet articles. By the Erasmic Company (Limited), Warrington. 247,886.

## Coming Events.

Tuesday, September 16.

North-East Lancashire Chemists' Association, White Bull Hotel, Blackburn, at 9.15 P.M. Meeting "to consider the attitude of the Pharmaceutical Journal."

Wednesday, September 17.

Chemists' Managers' and Assistants' Society of Great Britain. An extra general meeting will be held at the Horseshoe Hotel, Tottenham Court Road, London, W., to make new rules, amend, alter, or rescind some of the existing ones, and to discuss certain matters of urgent importance to qualified chemists. Managers and assistants in drug-stores are invited to be present. Chair to be taken at 8 o'clock sharp.

Wednesday, October 1.

Pharmaceutical Society of Great Britain, 17 Bloomsbury Square, London, W.C. Opening of the sixty-first session of School of Pharmacy. Distribution of prizes by the President, and inaugural sessional address by Professor W. Palmer Wynne, D.Sc., F.R.S. At 3 P.M.



## Trade Report.

**NOTICE TO BUYERS.**—The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of drugs and oils vary greatly, and higher prices are commanded by selected qualities even in bulk quantities. It would be unreasonable for retail buyers to expect to get small quantities at anything like the prices here quoted.

42 Cannon Street, London, E.C.: September 11.

**B**USINESS in drugs and chemicals is rather better this week in many quarters, and fluctuations in value are more numerous than usual. The chief interest has centred in American oil of peppermint, owing to speculative buying, and one advance has succeeded another. Both English and foreign oils of lavender are dearer, owing to small yields, and the same may be said of French geranium. English pressers of peach-kernel oil are asking slightly higher prices. Crude drugs show little movement. Still higher prices are quoted for senega from New York, but business on this market is of a retail character. Serpentry has slightly advanced, and dearer rates are asked for American spermaceti. Ergot is flat, and for forward delivery lower prices would be accepted. In fine chemicals, quinine is very quiet in second-hands. Morphine is a strong market, notwithstanding the fact that by the new treaty concluded with China the importation to that country will be restricted. Cream of tartar of the higher grades is a shade easier. Heavy chemicals show an improvement in business, bleaching-powder being still a feature of interest. Hypo-sulphite of soda is dearer, and pearlashes are easier. The following are the principal fluctuations of the week:—

Higher	Firmer	Easier	Lower
Arrowroot (St. V.)	Ammonia sulphate	Benzols	Chamomiles
Cloves (Zan.)	Morphine	Cream of tartar	Ergot (forward)
Oil, geranium	Oil, lavender	Pearlashes	Pimento
Oil, peach-kernel	(Eng. and foreign)		
Oil, pepper-mint (HGH)			
Oil, sassafras			
Pepper, black			
Serpentry			
Shellac			
Soda, hyposulphite			
Spermaceti (Amer. refined)			

### Arrivals.

The following drugs, chemicals, &c., have arrived at the principal ports of the United Kingdom from August 28 to September 2, inclusive:—Acetone (@ Hamburg), 10; acid, acetic, 215 pkgs.; acid, carbolic (@ Amsterdam) 25, (@ Rotterdam) 150; acid, citric (@ Bordeaux), 18; acid, oxalic (@ Hamburg), 36; acid, sulphuric (@ Amsterdam), 56; acid, tartaric (@ Rotterdam), 13; acetate of lime (@ New York), 240 bgs.; albumen (@ Havre), 18; alumina sulphate (@ Ghent), 150; arrowroot (@ Trinidad), 50; arsenic (@ Antwerp), 66; "balsams" (@ Hamburg), 4; bay-rum (@ St. Thomas), 9; bleaching-powder (@ Antwerp) 24 cks., (@ Hamburg) 123, (@ Tréport) 90, (@ Rotterdam) 120; borax (@ Hamburg), 20; canary-seed (@ Mazagan) 103, (@ Amsterdam) 250; cardamoms, 123; castor oil (Ital.) 35, (@ Calcutta) 1,690 cs. 100 x  $\frac{1}{2}$  cs.; chamomiles (@ Antwerp) 5, (@ Ghent) 21; chillies, 231; cinchona (@ Colombo) 27, (@ Paita) 16; citrate of lime (@ Messina), 49; caraway-seed (@ Rotterdam), 222; cassia-bark (@ Kobé), 567; cochineal (@ Las Palmas), 14; cod-liver oil (@ Rotterdam), 50; coriander-seed (@ Mazagan), 34; cream of tartar (@

Bordeaux), 139; drugs (@ Yokohama) 11 cs., (@ Mollendo) 1 cs. (@ New York) 25, (@ Antwerp) 26, (@ Hamburg) 5 bls., (@ St. Nazaire) 12; essential oils (@ Ostend) 17, (@ Catania) 8, (@ Palermo) 8, (@ Boulogne) 18, (@ Messina) 49; eucalyptus oil (@ Melbourne), 59; farina (@ Stettin) 2,080, (@ Ghent) 50, (@ Hamburg) 1,050; galls, 70; glycerin (@ Australia), 27 drms.; gum, unenumerated (@ Suez), 10; honey (@ Jamaica), 153 cs., (@ Canada) 20; lime oil (@ Guadeloupe), 2; liquorice (@ Naples) 30 cs., (@ Batoum) 595 cs.; mustard oil (@ Calcutta), 25; naphthalene (@ Antwerp), 10 brls.; olive oil (@ Marseilles), 32 brls. 58 cs.; opium (@ Salonica) 68 cs., (@ Marseilles) 11 cs., (@ Smyrna) 21, (@ Constantinople) 43; orange-peel (@ Naples) 70 cks., (@ St. Kitts) 6; orris (@ Leghorn), 32; peppermint oil (@ Montreal), 16; pimento (@ Jamaica) 682, (@ Havre) 500; phosphorus (@ Montreal), 155 cs.; pot. carb. (@ Tréport), 11; pot. caustic (@ Calais), 11; pot. chlor. (@ Sweden), 200; pot. chromate (@ Amsterdam), 24; pot. oxalate (@ Rotterdam), 30; pot. permanganate (@ Hamburg), 41; quinine (@ Amsterdam), 8 cs.; rhubarb (@ Bombay) 38, (@ Shanghai) 48 cs. and 16 *in tr.*; saffron, 3; shellac (@ Calcutta) 2,155, button ditto, 148; soda crystals (@ Antwerp), 450 bgs.; soda sulphate (@ Amsterdam) 38, (@ Antwerp) 20; soy (@ Hong-Kong), 50; storax (@ Smyrna), 25; squills (@ Messina), 20; sugar of lead, 62; sulphur (@ Girgenti) 350 tons, (@ Catania) 800 bgs. 50 cks. 50 brls.; tamarinds (@ Antigua) 20, (@ Barbados) 60; tartar (@ Rotterdam) 3, (@ Bordeaux) 58; turmeric (@ Bombay), 200; vanilla (@ Auckland), 8 cs.; wax, bees' (@ Sydney) 12, (@ Hamburg) 14, (@ Jamaica) 14, (@ Morocco) 29; wax, ceresin (@ Hamburg), 105; wax, Japanese (@ Kobé), 53 cs.; wine-lees (@ Messina), 438 bgs.; zinc oxide (@ Amsterdam), 40.

### Heavy Chemicals.

A heavier business is being transacted in the heavy-chemical market on both home and export account in prompt and also forward requirements. Inquiries for forward particularly are much more numerous, and, on the whole, are being brought to a conclusion well. The great feature of interest is, of course, centred in bleaching-powder. Prices for prompt are nominally unchanged from the figures which have been ruling for some time past, but for next year conditions are entirely different. Prices accepted are as far as possible being kept secret, although from 4*l.* to 4*l.* 5*s.* per ton, free on rails, works, may be taken as a fair figure. At the same time, each order is more or less being treated on its own particular merits, and it is stated that certain manufacturers are giving buyers to understand that they will meet any competition, and it is believed that in more than one instance this has been taken advantage of, with the result that value has actually meant only about 3*l.* 10*s.* on rails. Such, however, is quite exceptional, even under existing conditions of free competition. There is no alteration in alkali, caustic soda, &c., as the arrangements regarding these products have not been dissolved. Soda crystals are in better demand.

**SULPHATE OF AMMONIA** is steady, and again a trifle dearer. Beckton, 11*l.* 2*s.* 6*d.*; October-March delivery, 11*l.* 15*s.*; Beckton terms, 11*l.* 18*s.* 9*d.* to 12*l.*; London, 12*l.* 5*s.* to 12*l.* 6*s.* 3*d.*; Leith, 12*l.* 6*s.* 3*d.* to 12*l.* 8*s.* 9*d.*; Hull, 12*l.* 2*s.* 6*d.* to 12*l.* 5*s.* Exports from Leith last week amounted to 473 tons.

**BENZOLS** are still very low, and have a distinct tendency towards further decline from present figures, which are, nominally, 90-per-cent. 7*½d.* per gal., and 50-per-cent. 7*d.* per gal. Aniline oil and salt are fairly firm, at unaltered rates of 4*½d.* and 4*¼d.* per lb., respectively.

**LEAD COMPOUNDS.**—In fairly steady demand, at unchanged figures. White sugar of lead, 24*l.* 5*s.* per ton, less 2*½* per cent., Glasgow. Brown sugar of lead, 17*l.* per ton, less 2*½* per cent., Glasgow. Nitrate of lead, 22*l.* 10*s.* per ton, less 2*½* per cent., Glasgow.

### Liverpool Drug-market.

Liverpool, September 10.

There are great complaints of absence of inquiries, no doubt due to the continuance of the holiday-season.

**CASTOR OIL.**—Some good seconds Calcutta sold from the quay on private terms at something under 2*½d.* per lb. There is little demand, and it is quoted ex store 2*½d.* to 2*¾d.* per lb.

**BALSAM COPAIBA.**—No further arrivals. Holders ask 1*s.* 9*d.* for Para and 1*s.* 10*d.* per lb. for Maranham.

**HONEY.**—There are inquiries for new Californian. It is difficult to obtain offers, and for old, higher rates are asked.

**GUM ACACIA.**—Several parcels have changed hands, but the market-value is as before.

**QUILLAYA-BARK.**—Very firmly held, at 13*l.* 10*s.* per ton.

**AFRICAN GINGER.**—Holders now ask 45*s.* per cwt., and not much is offered.

### German Drug-market.

Hamburg, September 9.

Business is quiet, and our drug-market shows a few changes only.

**ANISE-SEED** of old crop is quoted 38*m.* and new crop 36*½m.* per 100 kilos.



CAMPHOR (refined) is quiet; second-hand holders ask 410m. per 100 kilos. on the spot, with buyers at 407½m.

CONDURANGO is quiet at 63m. to 60m. per 100 kilos.

CANTHARIDES is firm, new flies being quoted 525m. per 100 kilos.

CUMIN-SEED.—Maltese is improving in value at 49m. to 50m. per 100 kilos., and Morocco 40m. to 42m. per 100 kilos.

ERGOT is quiet, but meets with rather more attention from consumers at the low rates of 260m. to 250m. per 100 kilos.

KOLA is very scarce, and firm at 65m. per 100 kilos.

LYCOPodium is scarce for spot delivery. There are reports that the new crop will turn out very small, as the heavy rains and the cold weather have damaged the ripening of the seed.

QUININE is unchanged at 29m. per kilo.

SENEGA is extremely scarce, and 425m. per 100 kilos. is now asked.

SUGAR OF MILK is firmer at 78m. to 80m. per 100 kilos.

SPERMACETI is quoted dearer at 215m. per 100 kilos.

WAX (JAPANESE) is unchanged at 105m. per 100 kilos.

WAX (CARNAUBA).—Grey is quoted 108m. to 115m. and yellow 150m. to 170m. per 100 kilos.

COD-LIVER OIL is very firm; non-congealing oil at 135m. per barrel.

CASTOR OIL is quiet, but January to June delivery at 47m. per 100 kilos. meets with more attention.

PEPPERMINT OIL is firmer at 10½m. per lb. for HGH, and Japanese 10m. per kilo.

STAR-ANISE OIL is firmer at 10m. per kilo.

### Cablegrams.

HAMBURG, September 11:—American HGH oil of peppermint is advancing, and to-day's price is 11½m. per lb. Menthol is firmer at 34m. per kilo. Refined camphor is in better demand, and the same applies to myrrh, for which 160m. per 100 kilos. is asked.

SMYRNA, September 10:—The sales of opium for the week ending Wednesday amount to about 100 cases at the equivalent of from 6s. 10d. to 8s. 2d. per lb., f.o.b. Smyrna. Good qualities are greatly in demand, but there are few sellers at present prices. The market is firm, and an early advance is expected.

ACID, OXALIC.—Present prices are very low, and in some quarters an advance is anticipated before the close of the year. From 2½d. to 2¾d. per lb., net, is quoted.

ALMONDS.—A report from Messina, dated September 1, states that a decline of 5s. to 6s. per cwt. ensued immediately the new crop was brought to market. Current quotations are: P and G, sweet 89s., choice 94s.; Avola, choice, 109s. per cwt. of 50¾ kilos., f.o.b.

ALUM.—The exports from Civitavecchia during 1901 amounted to 4,330 tons, as against 6,327 tons in 1900, or 1,997 tons less.

ARROWROOT.—Owing to the renewed volcanic eruption in St. Vincent the price of this article has risen, and business has been done at 3d. to 4d. per lb. for fair to fine quality.

BAYBERRY-BARK.—Small sales have been made at 24s. per cwt., spot.

BLEACHING-POWDER.—English on the spot is unchanged at 7l. per ton, but for next year's delivery 4l., ex ship London, is quoted.

CANARY-SEED is steady at the recent advance. There is now very little Turkish seed on the market, but the better qualities of Morocco are in fairly good supply, and tend to keep the price from rising at present.

CHAMOMILES.—Fine white flowers are not to be had; last price paid was about 95s., c.i.f. Fair white firsts, few brownish, are quoted 48s.; and seconds, 40s. per cwt., c.i.f.

CIVET.—Guaranteed pure is obtainable at 7s. 6d. per oz.; anything offering below this figure may be taken as adulterated.

COLOCYNTH.—Good pale Turkey. is offered at 1s. 6d. per lb.

DRAGON'S-BLOOD.—Two cases of good lump were sold immediately after the auction last week at 10l. 10s. per cwt. The exports from Singapore to Great Britain from January 1 to July 31 have been:—

	1902	1901	1900	1899	1898	1897
Piculs ...	109	55	129	152	40	74

CREAM OF TARTAR.—Quiet. Best white crystals on the

spot are quoted 73s. and powder 75s. per cwt.; 95-per-cent. foreign powder is obtainable at 78s.

ERGOT.—Russian on the spot has been sold at 1s. 3d., and Spanish at 1s. 6d. To arrive, one agent quotes Russian at 1s. 2d. to 1s. 3d., and Spanish 1s. 4d. to 1s. 6d., c.i.f.

GALLS.—Japanese are quoted 52s. 6d. per cwt., c.i.f., and Chinese 56s., c.i.f.

GAMBIER.—Cubes are unobtainable on the spot. A shipment of 15 tons for arrival was sold last week at 39s. to 40s. per cwt.

HONEY.—As mentioned some weeks ago the crop of new *Californian* will be a small one, and prices will be dearer. New *Irish* honey will shortly be on the market, and prices, it is expected, will be cheap.

IPECACUANHA.—Since the auctions fair sales of Rio have been made at 7s. per lb. in one direction, but other importers are asking 9s. Cartagena is quoted 3s. 6d. to 4s., according to quality.

LEMON-JUICE.—A report from Messina, dated September 1, states that the market is neglected, lower prices being quoted for future delivery. Prompt shipment is quoted 13l. 15s., December-January shipment 13l. 5s. Citrate of lime, prompt 14l., and December-January shipment 13l. 10s. per pipe of 130 gallons, f.o.b.

LYCOPodium.—We understand that the new crop of lycodium is about three weeks later than usual this year, having been delayed by continuous heavy rains. It is also likely to be a small one according to reports received from gatherers. As is well-known the 1901 crop was not abundant and values ruled high during the whole season. Stocks on the Continent are said to be practically exhausted now, or at least they will not be sufficient to cover the wants of consumers until the new crop comes in. Spot prices in Hamburg have advanced and the equivalent of 2s. 1d. is now asked for twice-sifted. Moreover it must not be forgotten that growers have been accustomed to high prices for some years, and enquiries are already on the market for new crop goods, so that it is probable still higher prices may be seen. On the London market 2s. 2d. to 2s. 2½d. per lb., c.i.f., is quoted for new crop for October delivery.

MORPHINE.—The market is very firm and tending upwards, at 3s. 9d. per oz. for hydrochloride in powder, and some makers are unable to guarantee delivery before the end of the year, and even beyond that period. In the new Chinese treaty which has just been signed there is an Article which restricts the importation of morphine into China except at a prohibitive duty, which is not yet known. It is also reported that the treaty comes into force on November 1.

OIL, ANISE, STAR, is firmer, one holder asking 4s. 6d. for finest; business has been done up to 4s. 4½d. per lb.

OIL, CAJUPUT, is quoted at from 2s. 4½d. to 2s. 5d. per bottle, according to quantity.

OIL, CASTOR.—A report from Calcutta, dated August 21, states that prices have declined about 4a. all round. At this reduction buyers have come into the market, and a fair amount of business has been put through at quotations for near and near forward deliveries. Stocks and production are moderate, and current prices are considered low.

OIL, CITRONELLA.—Ordinary Ceylon is quoted 10d. to 10½d. per lb. in cases, and 9d. in drums, on the spot.

OIL, COD-LIVER.—The London market is quiet, and while refiners in Norway do not appear to alter their quotations, it is possible to obtain finest medicinal oil at 137s. per barrel, on the spot. Our Bergen correspondent writes on September 6 that the market is extremely quiet at 135s. per barrel, f.o.b. Bergen, for finest non-congealing oil. The exports from that port to date amount to 5,911½ barrels, against 7,464½ barrels at the same time last year.

OIL, GERANIUM.—Quotations have advanced 1s. per lb. as it is reported the French crop will be very poor.

OIL, LAVENDER.—English is now quoted at 25s. per lb. net, being dearer. Foreign oil has also advanced, and the yield will probably be small.

OIL, LEMONGRASS.—Holders continue to ask 5d. per oz., on the spot.



**OIL, OLIVE.**—A Messina report, dated September 1, states that the crop in Sicily and in many districts of Calabria is practically a failure. In the province of Gioja, however, the trees still promise a good yield. Unfortunately, the olive-fly has made an early appearance; what progress it will make will depend on the weather. "Bulls" are anxiously watching Spain, where incredibly low prices retard the advancing movement of the Sicilian market.

**OIL, PEACH-KERNEL.**—English pressers have advanced their prices  $\frac{1}{2}$ d. per lb. to 8d. net for cwt. lots, and  $8\frac{1}{2}$ d. for smaller quantities. *Pallid* is  $10\frac{1}{2}$ d. net.

**OIL, PEPPERMINT.**—There has been an all-round advance in American peppermint oil this week, and now that the crop is being distilled it is evident the shortage is more serious than what it was originally supposed to be. Some dealers who had no faith in the gradually advancing prices are now regretting that they did not lay in a stock some months ago, which they could have now turned over at a fair profit; as it is, they must now be content to look on at these high prices. American HGH has been advancing almost daily, and is from 1s. to 1s. 6d. dearer, business having been done at from 10s. 9d. up to 11s. 9d. per lb., spot. To arrive importers now ask 11s. 9d. also. Fine so-called Wayne County oil, in tins, has been sold at 9s. 6d., spot, in quantity, with some qualities offering down to 8s. 9d. Todd's crystal white is quoted 11s. On the other hand, Japanese dementholised is slow of sale at 4s. 3d. per lb. It is possible, however, in view of the high prices for American, that buyers may eventually turn their attention to Japanese.

**OIL, SASSAFRAS.**—American of genuine quality has been advanced to 1s. 8d. per lb., net.

**OIL, WOOD.**—On the spot 29s. 6d. to 30s. per cwt. is quoted for Chinese, and small sales have been made at these figures. For October-December steamer shipment 24s. 6d., c.i.f., is asked, and for Japanese 25s., c.i.f., is wanted for a shipment near at hand. The United States have purchased the bulk of the recent arrivals on this market.

**OPIUM.**—The London market is quiet, with a small business in Salonica opium to arrive at recent rates, and Karahissar up to 7s. 9d., spot. Finest soft-shipping Tokat has also been sold at 15s. 9d. The new crop of Persian is now arriving in London, but the bulk of that sold has been rejected by buyers as not being up to the 10-per-cent. standard. This makes good testing opium, which is very scarce, worth 8s. 6d. to 9s. 6d. per lb. on the spot.

**CONSTANTINOPLE, September 5.**—Notwithstanding the firm tone ruling in Smyrna, where everyone expects a rise, the market here is very quiet, and prices are stationary. The week's sales amount to 13 cases druggists' at 6s. 4d. to 6s. 10d., and 8 cases soft shipping at 8s. 9d. per lb., f.o.b.

**SMYRNA, August 29.**—The market is very firm, sellers being reserved, and it is with difficulty that the following transactions have been put through for account of English and Continental markets. The sales amount to 48 cases, comprising 21 cases new current talequale, at the equivalent of 6s. 10d. per lb., 14 cases Karahissar talequale at 7s. 2d. to 7s. 5d., and 13 cases Yerli talequale at 7s. 6d. to 7s. 10d. per lb., c.i.f. The allowance for waste on new opium has been reduced to  $\frac{1}{4}$  per cent. Speculation has been practically a dead letter this week, but the market closes firm with buyers. The arrivals in Smyrna amount to 3,396 cases, against 1,980 cases at the same time last year.

**PODOPHYLLUM-ROOT.**—Business has been done at 24s. net, spot.

**POTASHES.**—Montreal potashes are quoted 25s. 6d. per cwt. Pearlashes are rather easier, at 39s.

**QUININE.**—Very quiet in second hands, practically no business being reported. Buyers offer  $9\frac{1}{2}$ d., spot, with sellers at  $9\frac{3}{4}$ d. per oz.

The exports of quinine, quinine-preparations, &c., from Germany during the six months ended June amounted to:—

	1902	1901	1900
Kilos. ... ..	96,000	111,800	100,900
Marks ... ..	4,032,000	4,696,000	4,541,000

**SALICIN** is very firm, at from 15s. to 15s. 6d. per lb. from makers, according to quantity.

**SENEGA.**—A New York cable received on Wednesday, states that the scarcity continues, and that the lowest price is now 2s.  $10\frac{1}{2}$ d. per lb., c.i.f. Buyers on the spot continue to hold off, and only a small business is passing, at 2s. 10d. per lb., net.

**SERPENTARY.**—A cable received on Wednesday quotes 1s.  $9\frac{1}{4}$ d. per lb., c.i.f., being 1d. dearer. Supplies on the spot are very small, and 1s.  $9\frac{1}{2}$ d. net is asked.

**SILVER NITRATE.**—For 100-oz. lots one maker quotes 1s.  $3\frac{11}{16}$ d. per oz. net.

**SODA HYPOSULPHITE** is dearer all round, at 5l. per ton in cases and 5l. 10s. in casks, f.o.b. Liverpool.

**SPERMACELE.**—American refined has advanced to 1s. per lb., and there is nothing now obtainable at less. From New York  $11\frac{1}{2}$ d. per lb., c.i.f., is quoted.

**SPICES.**—There has been more business doing in pepper at rather dearer prices, and Zanzibar cloves are also dearer with a fair business passing. The auctions on Wednesday were small and unimportant; Calicut *Ginger* was bought in at 46s. per cwt. for brown rough, a bid of 42s. 6d. being refused. A small lot of Jamaica sold at 40s. per cwt. for middling dull. *Pimento* lower; common sold at  $2\frac{1}{2}$ d., and fair partly sold at  $2\frac{3}{4}$ d. per lb. *Mace* sold at 1s. 8d. per lb. for middling red Penang, and at 1s. 4d. to 1s. 5d. per lb. for good West India. Zanzibar *Cloves* are dearer; on Wednesday spot sold at  $3\frac{1}{2}$ d. to  $3\frac{3}{4}$ d., and forward delivery at  $3\frac{3}{4}$ d. to  $3\frac{1}{2}$ d., according to position. Black *Pepper* dearer; good Wynaad was bought in at  $6\frac{1}{2}$ d. per lb. Singapore sold privately at  $6\frac{3}{4}$ d. to  $6\frac{1}{2}$ d. on the spot, September-October shipment at  $6\frac{1}{2}$ d., and January-March at  $6\frac{1}{4}$ d. per lb. Singapore White is still quoted  $10\frac{1}{2}$ d., and Penang 9d. per lb. on the spot.

**STROPHANTHUS.**—Brownish Kombé is offered at from 2s. to 2s. 3d. Fine green is unobtainable.

**SULPHUR.**—An advice from Messina, dated September 1, states that the recent firmer tendency of the market has been fully maintained. As previously pointed out, the total existing stock of brimstone (with the exception of about 5 per cent.) is owned by the monopoly. Of the new production, now in process of melting, 20 per cent. to 25 per cent. belongs to "outsiders"; but, owing to lack of transport, most of the new-melted brimstone remains at the mines, and the quantity arriving at the ports is very limited. Abroad, everybody appears to be imbued with the idea that prices will fall considerably, and were selling "short." Instead of timely buying when the monopoly was a willing seller, purchases were postponed until arrival of steamers, and opportunity was thus given for advancing prices 1s. to 2s. The following are the current quotations: Best unmixed seconds, 82s. 6d.; best thirds, 75s.; refined block sulphur, 86s. 6d. per ton of 13 Sicil. cantars. Refined roll sulphur, in 3-cwt. casks, 97s. 3d.; sublimed flowers, pure, in bags, 99s. 6d.; sublimed flowers, current, in bags, 91s. 6d. per ton of 20 cwt., f.o.b.

**WAHOO-BARK OF ROOT** has been sold, in small lots, at 9d. per lb. net.

### Adulteration of Linseed Oil.

The adulteration of linseed oil in the United States has reached such a crisis that the oil and paint trades associations are taking action to prevent their members from being victimised. The Detroit Paint and Oil Club has made an offer to its subscribers to analyse samples free of all cost wherever any question arises as to purity, so that the offenders may be brought to book, and made to pay for their misdeeds.

### Zanzibar Produce.

Mr. Vice-Consul Kestell-Cornish, in his annual report on the trade of Zanzibar, states that the clove-crop in 1901 proved much better than was anticipated. It is very difficult, he says, to prophesy accurately in one year what the yield will be during the two seasons in the next. For example, the new crop—August, 1901, to July, 1902—was estimated at no more than 80,000 bales, whereas it already amounted to 71,398 bales at the end of December, and will, it is estimated, reach a total of 90,000 bales. Several causes are adduced as possibly affecting the yield of this article. The principal are: (1) care in cultivation, for, in the case of a heavy crop, trees have been found to suffer very considerably from the destructive carelessness of the clove-pickers; and (2) the rains, the fall of which appears to have been very favourable to the young trees until the beginning of December, after which dry weather set in and the plants died in hundreds—burnt up by the sun. Planters seem to have seriously turned their attention to chillies, which have increased considerably in the last two years. The total average produce during the years 1896, 1897, 1898, and 1899 was 4,375 cwt.; in 1900 over 9,060 cwt.; and in 1901, 11,875 cwt.



## Pharmaceutical Society of Ireland.

### COUNCIL-MEETING.

THE Council met at 67 Lower Mount Street, Dublin, on Wednesday, September 3, at 3 o'clock. The Vice-President (Mr. J. I. Bernard) presided, and the other members of Council who attended were Messrs. P. Kelly, J. Edgar Connor, W. V. Johnston, Wm. Jameson, P. N. White (Sligo), R. I. Baxter, J.P. (Coleraine), Smith, and Brown.

### MR. BEGGS RESIGNS THE PRESIDENCY.

The REGISTRAR (Mr. Ferrall) read letters from Mr. George D. Beggs, written in July, to the Vice-President and to him (Mr. Ferrall), stating that he felt obliged to resign the office of President in consequence of inability to find the time necessary for the adequate discharge of the duties of the office. Also the following letter sent by the Registrar to Mr. Beggs on August 6:—

DEAR MR. BEGGS,—As only six members were present to-day no business could, of course, be transacted; but there was an informal discussion on the subject of your resignation, and the desire was unanimously expressed that I should ask you to kindly reconsider same, which I have much pleasure in doing. There is no doubt that had there been a quorum a resolution to that effect would have been unanimously passed.

To this Mr. Beggs replied as follows:—

DEAR MR. FERRALL,—Yours to hand, and in reply I write to say that while feeling pleased at the confidence of the members of Council in wishing me to retain office, I have decided that I must adhere to my former letter of resignation.—I am, yours faithfully, G. D. BEGGS.

The VICE-PRESIDENT said he was sure the resignation of Mr. Beggs was a matter of great regret to them all. He had served them faithfully and well. He (the Vice-President) had hoped that they would have been able to secure his services in the chair until the end of the year—namely, October 1. Mr. Beggs, however, felt that unless he could do the work he should not retain the office. He (the Vice-President) was glad to say that this step was taken by Mr. Beggs, not on account of any unpleasantness, lack of friendly feeling, or want of interest in the work of the Society, but purely from commercial reasons. He had urged Mr. Beggs to continue to the end of the year, but he had declined to do so, saying that he had remained in office even longer than his business permitted. The discharge of the presidential duties had cost him more time than he could afford, for he not only attended the monthly meetings of the Council, but came several times a week to meetings of committees as well.

MR. KELLY: It is a pity we cannot retard his resignation to one more meeting. We all have the greatest confidence in Mr. Beggs.

MR. BAXTER said they all exceedingly regretted Mr. Beggs's resignation.

The VICE-PRESIDENT: But we will still have the pleasure of his company at the Council-meetings, I hope, for a great many years.

MR. BAXTER said they could not now do otherwise than accept the resignation, and at the same time express their obligations to Mr. Beggs, who had left no stone unturned in his efforts to advance the interests of the Society. He could bear testimony to the exceeding geniality of his nature, and his readiness to fall in with any views that he thought would conduce to the advantage of the Society. They should put on record their appreciation of his services, and he (Mr. Baxter) therefore moved the following resolution:—

In accepting with regret the resignation of Mr. George D. Beggs of the office of President of the Pharmaceutical Society of Ireland, which he filled up to the date of resignation with so much ability, impartiality, and credit to himself and to the Society, the Council deem it right to place on record their deep sense of obligation to him for his untiring attention to every department of the Society's work, and for the services which he rendered to pharmacy in general.

The acceptance of Mr. Beggs's resignation (continued Mr. Baxter) was the more easy to them because they had such an able Vice-President as Mr. Bernard had shown himself to be during his year of office; and his (Mr. Baxter's)

suggestion was that Mr. Bernard should occupy the chair until the annual meeting.

MR. SMITH said he had great pleasure in seconding the resolution, and in endorsing all that Mr. Baxter had said.

The VICE-PRESIDENT, in putting the resolution, said that he and Mr. Beggs had been associated together for thirty years—from the time when they both first entered the business. It was nearly three months since Mr. Beggs sent in his resignation, and no pains had been spared to induce him to reconsider it. He would, however, be as loyal a comrade and as good a worker with them on the Council as he had been during his presidency.

The resolution passed unanimously.

### ANOTHER RESIGNATION.

A letter from Mr. J. S. Ashe resigned his office of lecturer in materia medica, in consequence of having obtained an appointment in the Adelaide Hospital.

The VICE-PRESIDENT said Mr. Ashe, who was one of their licentiates and had the interests of the Society at heart, had consented to continue to give as many lectures as should be necessary until his successor should be appointed. A letter should be written thanking him for his services.

### SIR WILLIAM WHITLA.

The following letter was received from Sir William Whitla in reply to one from the Council congratulating him on his receipt of the honour of knighthood:—

DEAR MR. FERRALL,—Please convey to the President and Council of the Pharmaceutical Society my very sincere and grateful appreciation of their kind letter of congratulation, which I prize more than I can well convey in words. My association with pharmacy, and especially with the Pharmaceutical Society of Ireland, I value amongst the most pleasant experiences of my life, and to know that I have not been forgotten by the men with whom I had the honour of co-operating in striving to raise the standard of pharmacy in Ireland is a very sincere gratification, though my part in their successful work was a very humble one.

Believe me, &c.,

W. WHITLA.

The VICE-PRESIDENT: We are very pleased to find that Sir William Whitla in his exalted position still appreciates the work of the Society; and we are glad to know that purely through his own merits he attained to the honour which has been conferred on him.

### PHARMACY ACT CASES.

A letter from the Chief Secretary's office enclosed, for observations from the Council, a copy of a memorial to the Lord Lieutenant from Robert Brett, who was fined 5*l.* on June 4, at Dromore West Petty Sessions, for selling a packet of Sandford's rat-poison. The memorialist stated that he was a shopkeeper in Sligo, and gave his version of the sale to Sergeant Barratt, R.I.C. The memorialist prayed a remission of the fine, stating that he had acted in ignorance of the law, and had never sold any medicine or drug before. He also represented that the penalty was a severe one, having regard to his means.

The VICE-PRESIDENT: Did we direct the sergeant to make the purchase?

The REGISTRAR: No; he acted on his own account.

MR. JAMESON said he thought examples should be made of people who offended in this way. The memorialist pleaded poverty, but he believed he would be able to pay 500*l.* The Society had had other cases in Sligo, and in one instance had been unable to recover a penalty of 5*l.* awarded against a defendant in consequence of the mistake of a clerk. The Council were not in a position to recommend the remission of the fine in question at all.

The VICE-PRESIDENT: In consequence of the trouble and expense we have been at in endeavouring to get the law carried out.

Order accordingly.

A letter from the Inspector General, R.I.C., stated that Dr. Michael O'Brien, of Miltown-Malbaw, had been fined 15*l.* for breaches of the Arsenic and Poisons Acts, but that he had given notice of appeal to Ennistymon Quarter Sessions to be held next October. There were three cases against the defendant.

The VICE-PRESIDENT said the documents connected with



the case ought to be forwarded to the Local Government Board, and the members resolved to that effect.

#### LISTS OF OPEN SHOPS.

The REGISTRAR submitted lists which he had commenced to prepare of pharmaceutical chemists and others keeping open shop.

The VICE-PRESIDENT said this was a very important matter. It was extremely desirable, not only for the information of the Council but also of wholesale firms, that they should have an accurate list of all the pharmaceutical chemists and chemists and druggists who were keeping open shop. There were a good many qualified pharmaceutical chemists who were not in business. The list might not be complete enough to print for another twelve months; but the task of compiling it was in the able hands of Mr. Ferrall, who would avail himself of every source of information in order to make the list correct, and when it should be printed he (the Vice-President) had no doubt that it would be extensively applied for.

#### THE AMERICAN PHARMACEUTICAL ASSOCIATION.

A letter from the President of the above Association invited the Council to send representatives to their jubilee semi-centennial meeting, which is to be held in Philadelphia during this week. It was ordered that a congratulatory cablegram should be sent to the President of the Association.

#### THE MEDALS.

A report of the School Committee recommended that the Society's gold medal for the best answering during the year should be awarded to Mr. William Arthur Berry, who had scored 269 marks out of a possible 300; and that the silver medal be given to Mr. Alfred Yoxall, who had scored 244 marks out of 300, these being the highest scores for the year.

The report was adopted.

#### THE ELECTIONS—NOTICE OF VACANCIES.

The VICE-PRESIDENT said that the Registrar's letters to members of the Council asking them whether or not they intended to seek re-election were at present sent out too late. The consequence was that it would be Friday, September 12, before the members of the Society would be in a position to know what vacancies there were, and they would have only four or five days to nominate candidates. He suggested that in future the Registrar's letters should go out in time for answers to be received at the July meeting of the Council. They often failed to have a meeting in August, and it was not too much to expect that members of Council should give three months' notice to their constituents of their intention to seek re-election.

This suggestion was ordered to be acted on.

#### ELEMENTARY CHEMISTRY.

The VICE-PRESIDENT moved the following resolution pursuant to notice:

That no student who has not taken out (or is not then engaged in taking out) a course of elementary chemistry be allowed to enter for the course of practical chemistry in the schools of the Society. This resolution, if adopted, to come into force on July 1, 1903.

He had no notion, when he gave notice of this resolution, that he would be in the chair. What he proposed was in accordance with the resolution which the Council passed and sent forward to the Privy Council, that the attendance of their students on a course of elementary chemistry should be made compulsory. That resolution, as they were aware, had been rejected by the Privy Council. His proposal was also in accordance with the practice of the Government technical schools. They did not allow their students to engage in practical chemistry unless they took out lectures in elementary chemistry at the same time. By adopting the resolution the Council would also be carrying out the recommendation of the Government visitor that their students should know something of elementary chemistry.

Mr. CONNOR: Would it not drive candidates away from our school?

The VICE-PRESIDENT: There is only one other school in Dublin—the Government Technical School—and it is the rule

there. There might possibly be a slight falling-off of candidates for a short time, but I do not apprehend it.

Mr. KELLY said they had already sent two resolutions to the Privy Council in favour of the proposed regulation, and both had been sent back to them; and if they were to pass a third, and it should be sent back, they would be in a rather ridiculous position, and their school would be stultified. The young fellows who went to the Technical School did so knowing nothing at all about chemistry; but that was not the case with the Society's Licence candidates, because the Preliminary examination had compelled them to know something of elementary chemistry. He believed that if the Council passed this resolution they would injure their school and get themselves into hot water with the Privy Council.

Mr. BAXTER said that on the last occasion on which this proposal was discussed the great reason urged in favour of it was that the Government visitor—Sir George Duffey—had complained very much of the ignorance shown by candidates at the practical chemistry examination, and had said that it could only be remedied by giving them a better grinding in elementary work. If the Preliminary examination were made what it should be it would to a certain extent do away with the deficiency of which Sir George Duffey complained.

The VICE-PRESIDENT, replying, said he could not hide from himself the fact that Mr. Kelly and others had voted in favour of attendance on an elementary-chemistry course being made compulsory on candidates for the Final examination; and they did so in deference to the often-expressed opinion of Sir George Duffey, and also because of the failures of candidates in the subject. They looked on such a regulation as an absolute necessity, and pressed it as far as they could. The Privy Council, in their wisdom, had rejected it for some reason or other. Mr. Kelly now said that they would get into hot water with the Privy Council if they passed it. He would remind Mr. Kelly of the importunate widow who gained her end at the finish. Why did the Technical School lay down the rule? Because they knew that it was utter rubbish to put a boy to practical chemistry before he knew something of theoretical. Instead of "stultifying" the school the Council would stultify themselves if they did not pass this resolution. But the monetary interests of some members of the Council appeared to be affected by it.

Mr. KELLY: I rise to order. The Vice-President should withdraw that statement. He says that the monetary interests of members are affected by this. I deny it *in toto*. I have been connected with the school, and the remuneration I have received is very little in comparison with what professors in other colleges receive. My chief point is that you will get up the back of the Privy Council.

The VICE-PRESIDENT: Our schools are not part of the Act. They are private institutions not carried out by an expenditure of the funds of the Society at all, but are self-supporting institutions, and I do not see that the Privy Council can object to this resolution. I am quite satisfied to let it go to them, in order to see whether they have power to reject it or not.

Mr. KELLY: I very much feel what the Vice-President has said as to the school being a voluntary institution. It not only pays for its own drugs and chemicals, but it also pays the Society 12*l.* a year rent; and it is rather hard, under the circumstances, to hear an imputation about pounds, shillings, and pence.

Mr. BAXTER said he did not think financial matters should be taken into account at all. His objection was that after two refusals it would be undignified to get a third slap in the face.

The VICE-PRESIDENT: I think it would be more undignified if we go back on our own resolutions.

The resolution was then put, and carried on a show of hands.

#### OTHER BUSINESS.

Mr. A. Forbes Watson was re-elected examiner in pharmaceutical and general chemistry.

The following gentlemen were elected members of the Society: Mr. A. J. Barnes, 1 Charlemont Street, Dublin; Mr. J. J. C. Culbert (A. Boyd & Co.), Lisburn; Mr. James Horgan, Kilmallock; Mr. J. P. Parke, Banbridge; and Mr. S. V. O'Connor, Selskar Street, Wexford.

Licences were then sealed, and the Council separated.







